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14

FOURTEENTH REPORT

COMMITTEE ON PUBLIC UNDERTAKINGS

(2006-2007)

(FOURTEENTH LOK SABHA)

NATIONAL HIGHWAYS AUTHORITY OF INDIA – NATIONAL HIGHWAYS DEVELOPMENT PROJECT (NHDP), PHASE- I.

MINISTRY OF SHIPPING, ROAD TRANSPORT AND HIGHWAYS

Presented to Lok Sabha on 08-12-2006
Laid in Rajya Sabha on 08-12-2006

LOK SABHA SECRETARIAT

NEW DELHI

December, 2006 / Agrahayana 1928(S)

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COMPOSITION OF THE COMMITTEE ON PUBLIC UNDERTAKINGS

(2006-2007)

Shri Rupchand Pal - *Chairman*

MEMBERS

Lok Sabha

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3. Shri Manoranjan Bhakta
4. Shri Gurudas Dasgupta
5. Smt. Sangeeta Kumari Singh Deo
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SECRETARIAT

1.	Shri S.K.Sharma,	*Additional Secretary*
2.	Shri J.P.Sharma	*Joint Secretary*
3.	Shri Ajay Kumar	*Under Secretary*
4.	Ms. Malvika Sharma	*Senior Executive Assistant*

INTRODUCTION

I, the Chairman, Committee on Public Undertakings having been authorised by the Committee to present the Report on their behalf, present this Fourteenth Report on National Highways Authority of India – National Highways Development Project, Phase-I.

2. The Committee's examination of the subject was based on the Report of the Comptroller & Auditor General of India-Union Government No. 7(Commercial) of 2005.

3. The Committee had a technical briefing by the officials of C&AG on 25th July 2006. The Committee took oral evidence of the representatives of National Highways Authority of India on 22nd August 2006 and Ministry of Shipping, Road Transport and Highways on 7th September 2006.

4. The Committee on Public Undertakings (2006-07) considered and adopted the Report at their sitting held on 6th December 2006.

5. The Committee wish to express their thanks to the representatives of the National Highways Authority of India and Ministry of Shipping, Road Transport and Highways for placing before them the desired material and information in connection with the examination of the subject. The Committee also place on record their appreciation for the assistance rendered by the officials of the Comptroller & Auditor General of India. They would also like to place on record their appreciation for the invaluable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

6. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in Part-B of the Report.

New Delhi
6th December, 2006
15 Agrahayana, 1928 (S)

RUPCHAND PAL
CHAIRMAN
COMMITTEE ON PUBLIC UNDERTAKINGS

List of Abbreviations – NHAI

1.	ADB	Asian Development Bank
2.	BC	Bituminous Concrete.
3.	BGs	Bank Guarantees.
4.	BIS	Bureau of Indian Standards
5.	BM	Bituminous Macadam
6.	BOQ	Bills of Quantities.
7.	BOT	Build, Operate, Transfer.
8.	CAGR	Cumulative Annual Growth Rate.
9.	CCEA	Cabinet Committee of Economic Affairs
10.	CCTV	Closed Circuit Television
11.	CO	Commercial Operation
12.	COPA	Conditions of Particular Applications.
13.	COS	Committee of Secretaries
14.	CPIS	Computerized Project Information System
15.	CRF	Central Road Fund.
16.	CRRI	Central Road Research Institute.
17.	CTUS	Cement Treated Upper Sub-base.
18.	CWIP	Capital Work In Progress
19.	DBM	Dense Bituminous Macadam.
20.	DOPT	Department of Personnel & Training
21.	DoRTH	Department of Road Transport & Highways
22.	DPRs	Detailed Project Reports.
23.	EDMS	Electronic Drawing Management System.
24.	EIL	Engineers India Limited
25.	EOT	Extension of Time.
26.	EPC	Engineering, Procurement and Construction
27.	FIDIC	International Federation of Consulting Engineers.
28.	GAAP	Generally Accepted Accounting Practices
29.	GDP	Gross Domestic Product
30.	GIS	Geographical Information Systems.
31.	GQ	Golden Quadrilateral
32.	GSB	Granular Sub-Base
33.	HRMS	Human Resource and Inventory Management Systems.

34.	IDC	Interest During Construction.
35.	IDFC	Infrastructure Development Finance Corporation
36.	IMG	Inter –Ministerial Group
37.	IRC	Indian Road Congress
38.	JBIC	Japan Bank of International Cooperation.
39.	LA	Land Acquisitions
40.	LAN	Local Area Network
41.	LD	Liquidated Damages.
42.	MIS	Management Information System.
43.	MoEF	Ministry of Environment & Forests
44.	MoRTH	Ministry of Road Transport & Highways
45.	MOSRTH	Ministry of Shipping, Road Transport and Highways.
46.	MSA	Million Standard Axles
47.	NHAI	National Highways Authority of India
48.	NHDP	National Highways Development Project
49.	NHs	National Highways.
50.	NSEW	North-South and East-West Corridor.
51.	OMT	Operate, Maintain & Transfer
52.	PCC	Profile Correction Course.
53.	PD	Project Directors.
54.	PFMS	Project Financial Management System.
55.	PIB	Public Investment Board
56.	PIUs	Project Implementation Units
57.	PLI	Professional Liability Insurance.
58.	PPP	Public –Private Partnership
59.	PSCs	Project Supervision Consultants
60.	PWD	Public Works Department
61.	QCBS	Quality and Cost Based Selection
62.	RCC	Reinforced Cement Concrete.
63.	ROBs	Rail Over Bridges
64.	SG	Steering Group
65.	SPVs	Special Purpose Vehicles.
66.	TFCS	Toll Fee collection Software
67.	WAN	Wide Area Network
68.	WMM	Wet Mix Macadam.
69.	WPI	Wholesale Price Index

PART – A

REPORT

I. OVERVIEW

1.1 The Audit Report of the Comptroller & Auditor General of India - Union Government (Commercial) - No. 7 of 2005 examined the construction of highways by National Highways Authority of India (NHAI) under National Highways Development Project (NHDP) Phase-I including its planning and funding mechanism. This project envisaged up-gradation to four/six lane of the existing two lane wide National Highways on Golden Quadrilateral linking the four metro cities of Delhi-Mumbai-Chennai-Kolkata, North-South Corridor linking Srinagar and Kanyakumari and East-West Corridor connecting Silchar and Porbandar.

1.2 The Central Road Research Institute (CRRI) was engaged as the technical consultants for the review. The report was based on records furnished by the NHAI and test checks carried out by C&AG of 32 stretches spread over 12 states covering 21 PIUs (Project Implementation Units), inputs including CRRI Reports and the discussions held with the management of NHAI and the Ministry.

1.3 NHDP Phase-I comprised 6,359 km of road length at an estimated construction cost of Rs. 30,300 crore and was scheduled to be completed by June 2004. Largely, it comprised the completion of the Golden Quadrilateral. According to the Audit Report, NHAI could complete works to the extent of 1,846 km (29 percent) up to June 2004. The corridor-wise achievement of Delhi-Mumbai, Mumbai-Chennai, Chennai-Kolkata, and Kolkata-Delhi up to June 2004 including partially completed stretches was 82 percent, 46 percent, 45 percent and 25 percent respectively.

1.4 According to the latest position submitted by Audit while briefing the Committee on 25th July 2006, as on 30th April 2006, works for a length of 4,026 km were fully completed and 1,298 km were partially completed (83.71%). The

extended target date of December 2005 was also not achieved. As on 30th April 2006, 45 stretches for a total length of 1,764 km were delayed ranging from 6 to 54 months.

1.5 The NHAI in this regard has submitted that: -

> "92.6% of the Golden Quadrilateral (connecting 4 metro cities of Delhi-Mumbai-Chennai-Kolkata) has since been completed. Works in the balance length of about 437 km is to be completed. 96% of the Golden Quadrilateral is targeted for completion by December 2006. The balance works are targeted for completion by December 2007, except for few packages which are likely to be completed by December 2008……"

1.6 NHAI further stated that: -

> "The approved cost of NHDP Phase-I was Rs.30, 300 crore (1999 prices) which was exclusive of escalation and interest during construction. The actual expenditure on implementation of NHDP Phase-I (up to June 2006) is within the approved cost allowing for escalation as per the increase in WPI (as per the conditions of contracts with contractors and consultants). An amount of Rs.2, 128 crore has been paid on account of escalation for the increase in WPI / to compensate for inflation in accordance with the conditions of the contract for the project cycle of each contract."

1.7 The salient features of observations made by Audit are as follows: -

(a). NHAI did not complete the implementation of NHDP, Phase-I in a time and cost bound manner. The Authority did not standardize its procedures and contract documents. The inconsistencies and infirmities in the contract conditions led to contractual complications, over payments and delays. NHAI also did not ensure enforcement of contract provisions for quality assurance and project management. This resulted in execution of sub-standard works in seven stretches test checked for quality out of 32 stretches examined in audit.

(b). NHAI did not standardize the length of stretches for award of contracts to facilitate cost comparison for award and execution of work nor did it devise any more robust and cost effective control mechanism as an

alternative. This resulted in variation in cost per km of contiguous stretches from Rs.1.86 crore to Rs.4.20 crore per km.

(c). NHAI lost an opportunity to generate toll revenue of at least Rs. 560 crore due to the delay in completion of the highways.

(d). NHAI did not address the risk associated with the terms of contracts and performance of DPR Consultants and PSCs, which ultimately became the primary reason for time and cost overrun.

(e). Deficient internal control and accountability system within NHAI was responsible for loss of Rs.24.44 crore in the sample stretches only on account of non-recovery of amounts from the contractors. NHAI failed to verify the authenticity and validity of the bank guarantees provided by the contractors.

(f). Accounting practices adopted by NHAI were not in consonance with the Generally Accepted Accounting Practices.

A copy of Highlights of the Audit Report is given at **Annexure-I**. The various acts of omissions revealed by the Audit in the above Report have been dealt with by the Committee in detail in the succeeding chapters.

II. IMPLEMENTATION OF NHDP

A. Genesis

2.1 The Audit has stated that the National Highways (NHs) comprised only two per cent of the total road network in India but carried over 40 per cent of the total traffic. Of the total length of NHs of 58,112 km about 25,000 km was under severe strain due to high volume of traffic coupled with insufficient maintenance resulting in poor riding quality. The Government, therefore, took up prioritization of projects for upgradation of NHs and launched the National Highways Development Project in October 1998.

2.2 In this connection, the NHAI stated that: -

> "According to the National Highways Act, 1956, the Central Government is responsible for development and maintenance of the roads declared as National Highways and can direct the respective State Government or any authority sub-ordinate to the Central Government to exercise these functions. Over the years, the development and maintenance of National Highways was carried out through the agency State Governments. However, it was felt that there should be a central agency to handle these responsibilities so that there could be uniformity in development, maintenance and management of National Highways in the country."

2.3 Thus, the National Highways Authority of India was constituted under the National Highways Authority of India Act 1988 (68 of 1988) as a Central Authority for the development, maintenance and management of the National Highways and associated facilities. The Authority (NHAI) became operational in 1995 with the appointment of a full time Chairman and Members.

2.4 The Ministry of Shipping, Road Transport and Highways further added in their written replies that: -

> "Ministry had been concerned about the upgradation of the National Highways network for a long time but the same was not possible due to paucity of funds. During 9th Plan document preparation, it was estimated that an investment of Rs. 74,500 crore (at 1996 prices)

would be required to remove the existing deficiencies. Ministry had also undertaken a study in early 1990s for planning of Expressways in the country. Around the same time in early 1990s, Government's policy gave thrust to economic liberalization and to improve the infrastructure. Roads are important infrastructure to facilitate the economic development. In this background, the then Government decided to undertake massive upgradation programme of high traffic density corridors of National Highways in the country."

2.5 Accordingly, the NHDP was launched to remove deficiencies of the existing National Highways and to offer better riding quality to the road users of the National Highways.

B. Implementation

2.6 A brief summary of events leading to the implementation of the NHDP as stated by the Ministry is given below: -

"In October 1998, the Government announced upgradation of stretches of National Highways under 'North-South and East-West Corridor'. A Task Force was constituted under the Chairmanship of Dy. Chairman, Planning Commission with following members: -

- Minister of Surface Transport
- Minister of Civil Aviation
- Chairman, IDFC
- Managing Director, Mahindra Ford
- Secretary, Road Transport & Highways
- Secretary, Civil Aviation
- Secretary to Prime Minister as Member Secretary

The Government decided to launch the programme quickly and accordingly 20 projects were identified to start with. The North South Corridor was launched on 6.1.99 by the then Hon'ble Prime Minister. The Task Force decided to include the National Highways connecting four major cities of the country viz Delhi, Mumbai, Chennai and Kolkata and named it Golden Quadrilateral as part of the overall upgradation programme. The name given to the total programme was 'National Highways Development Project (NHDP)'. The Ministry then started evolving the implementation methodology and preparation of Cabinet Note for requisite approvals.

In the year 2000, the Cabinet gave 'in principle approval' to NHDP as per following details: -

- Four laning of 10,500 km of National Highways at an estimated cost of Rs. 42,000 crores and construction of 1,500 km of expressways on new alignment / or 6 laning at an estimated cost of Rs. 12,000 crore.

- 4/6 laning of around 1,000 km of other National Highways (notably roads connecting to major ports) at an estimated cost of Rs. 4,000 crore.

- NHAI allowed to take investment decisions for individual projects within the overall programme approved by PIB/CCEA and to award contracts.

- NHAI to follow innovative implementing mechanism like Annuity / Shadow Toll based projects.

- NHAI Board restructured with Chairman, NHAI of the rank of Secretary to Govt. of India, five full time members of NHAI of the rank of Joint Secretary (now upgraded to Additional Secretary) to Government of India, four part time members including Secretary, Ministry of Finance (Deptt. of Expenditure), Secretary, Ministry of Surface Transport (Deptt. of Road Transport & Highways), Secretary Planning Commission and Director General (Road Development) and Additional Secretary.

In December 2000, CCEA gave approval for: -

- Undertaking 40 sub-projects of 4/6/8 laning in a length for 4659 km during two years 2000-2001 and 2001-2002. Investment of Rs. 30,300 crore on undertaking 40 sub projects.

- Up gradation of NH-2 between Agra and Barwa-Adda to 4/6 lane with World Bank Assistance at an estimated cost of Rs.2,763 crore.

- Contracts for year 2001-02 be awarded to the extent possible in BOT /Annuity method.

- Investment decisions subject to the guidelines specified by PIB.

Phase II of NHAI comprising mainly North-South and East-West corridor was approved in December 2003. Government constituted

Committee on infrastructure under the Chairmanship of Hon'ble Prime Minister which considered further phases of NHDP."

2.7 NHAI followed an implementation model, which was tried and tested earlier by Ministry of Road Transport and Highways. It was decided to continue with the same implementation model as was being followed for the Asian Development Bank (ADB) funded projects entrusted to NHAI as well as the 2nd World Bank project implemented by the Ministry through State PWDs. The three most important features of the implementation model were outsourcing of services, International Competitive Bidding (ICB) procedure and FIDIC system of contracts. Accordingly, the work of project preparation, supervision and construction of works were outsourced to consultants and NHAI confined itself to procurement, payment, and monitoring the targets.

2.8 Under this implementation model, DPR Consultants were appointed through a competitive selection procedure for preparation of Detailed Project Reports (DPRs) and the bid documents including the bill of quantities (BOQ). Based on the experience of the projects already under implementation at that time, it was expected that the DPRs would be completed in around 12 months and construction would be completed in about 36 months with the pre-construction activities undertaken concurrently. FIDIC ('Federation Internationale des Ingenieurs Conseils') is the French acronym of International Federation of Consulting Engineers. As per this FIDIC system of Contracts, Supervision Consultants, who were declared 'Engineer', were appointed through a competitive selection procedure. The Engineer administered the contracts. Day-to-day activities like monitoring the progress and quality, measurement of works, certification of payment, etc. were performed by them. In addition, the Engineer recommended extension of time and variation to the contracts, took over the work on completion, issued defect liability certificates, and acted as the first step in dispute resolution process by deciding the disputes, which could eventually be referred to arbitration.

III. DELAY IN COMPLETION OF NATIONAL HIGHWAYS

A. Reasons for Delay

3.1 According to Chapter 2 of the Audit Report, NHDP Phase-I was sanctioned by the Government in as early as October 1998 and 90 per cent of the land was already acquired. NHAI was to complete the award of contracts for execution of works for a total length of 6,359 km by March 2002 and the execution of the works were to be completed by June 2004. As against this target, NHAI could award contracts only for a total length of 4,863 km (76.47 per cent) as on 31 March 2002 and could complete the works for a total length of 1,846 km (29 per cent) till June 2004. Thus the achievement was far less than the targeted one. As a result, the corridor concept where the entire road length joining the metros becomes a fast lane with no bottlenecks was not achieved. Further, out of 32 stretches selected by Audit for test check, in eight stretches the delay was attributable to inability of the contractors to synchronise resources, ineffective contract management by NHAI and Project Supervision Consultants (PSCs), faulty and incorrect contract clauses. Incorrect and incomplete data in the DPRs also led to delay in taking decision, which ultimately resulted in delay in execution as analysed in the audit report. As per the latest position as on 30th April 2006 indicated by the Audit, works for a length of 4,026 km were fully completed and 1,298 km were partially completed. This works out to 83.71 per cent. Thus even the extended target date of end of December 2005 was not achieved. As on 30 April 2006, 45 stretches for a total length of 1,764 km were delayed ranging from 6 to 54 months.

3.2 When asked to reply on the above-mentioned observations of Audit, NHAI put forth the following written reply: -

> "**It may be mentioned here that the Government accorded the approval for NHDP Phase-I only in December 2000 (and not in October 1998 as pointed out by the Auditors)**…The broad reasons for delay in completion of some of the projects are as under-

(a) There were inordinate delays in acquisition of land due to procedural formalities, litigation and court cases, etc.

(b) There were considerable delays in getting the forest clearance.

(c) There were delays in obtaining clearances/approvals from the Railways for construction of Rail Over Bridges (ROB). Also, in packages where ROBs were constructed by the Ministry of Railways themselves, progress was not satisfactory leading to delays in completion of the projects.

(d) There were delays in shifting of utilities like, electric lines, water pipelines, sewer lines, etc.

(e) In many states, works were affected due to adverse law and order conditions and activities of anti-social groups. Further, stoppage of work by the local population demanding additional underpasses/bypasses, flyovers, service roads, was also frequent."

B. Accountability

3.3 When asked whether any responsibility had been fixed against the persons accountable for the delays, NHAI stated that: -

> "…the delays were mostly related to pre-construction activities like land acquisition, shifting of utilities, delay in approval of design and drawings from Railways for which responsibility cannot be fixed on any individual. However in case of delays attributable to the Contractors, NHAI has taken prompt actions to terminate the contracts and also notify seventeen non-performing Contractors (a list is at **Annexure- II**) who have not been allowed to participate in future bids invited by NHAI."

3.4 On being asked whether any responsibility for the delay in execution of work was/has been fixed on any contractor/PSC and whether any penalty was imposed on the erring parties, NHAI submitted the following reply: -

> "Where the delays were attributable to the contractors (such as tardy implementation by the contractors), NHAI has taken action against the contractors including levy of liquidated damages and termination of contracts.

The contracts prescribe for imposition of liquidated damages only where the delay is solely attributable to the contractors.

The contracts which have been terminated by NHAI or where liquidated damages have been levied due to delay in progress or delays in completion are as under-

Contracts which have been terminated

(a) Ganjam to Icchapuram section of NH-5 in the State of Orissa
(b) Etawah Bypass on NH-2 in the State of Uttar Pradesh
(c) Shikohabad to Etawah on NH-2 in the State of Uttar Pradesh
(d) Chitradurga Bypass on NH-4 in the State of Karnataka
(e) Srikakulam to Champavati on NH-5 in the State of Andhra Pradesh
(f) Six laning of Panchi Gujran to Kamaspur (Sonepat) in the State of Haryana
(g) Eight laning of Haryana/Delhi Border to Mukaraba Chowk in Delhi
(h) Lucknow-Kanpur Section of NH-25 in the State of Uttar Pradesh
(i) Nagpur-Hyderabad section of NH-7 in the State of Andhra Pradesh
(j) New Mangalore Port Road connectivity project in the State of Karnataka

Contracts where liquidated damages have been levied

(a) Westerly Diversion Project outside Pune City on NH-4 in the State of Maharashtra.
(b) Dehri-Aurangabad Section of NH-2 in the State of Bihar.
(c) Mohania-Sasaram Section of NH-2 in the State of Bihar.
(d) Lucknow-Kanpur Section of NH-25 in the State of Uttar Pradesh
(e) Guwahati Bypass on NH-37 in the State of Assam
(f) Namakkal Bypass in the State of Tamilnadu."

C. Corrective Measures

3.5 When asked as to what lessons have been learnt by the NHAI to ensure that such type of delays do not recur during the execution of subsequent phases of NHDP, NHAI replied that: -.

"…..As regards the lessons learnt during implementation of the project and the corrective actions taken so far, it is submitted that-

- With a view to remove discrepancies in Conditions of Contract, NHAI has already circulated standard bidding document for adoption in all future NHAI funded projects.

- NHAI has taken major initiatives for standardization and improvement of DPRs such as Peer review and proof checking procedures, deposit of performance security, penalties for delay and variation exceeding +/- 15%, debarment of key persons leaving the project midways, etc.

- Deterrent action against defaulting consultants has also been prescribed. A Standing Committee of three Chief General Managers of NHAI has also been formed to look into all such cases.

At the same time learning from the past experiences, several actions to remove the bottlenecks have already been initiated. With introducing the following specific measures, progress is expected to speed up:

(a) Department of Road Transport and Highways has been authorized by the Government to issue notification for land acquisitions subject to certain standard conditions without reference to Ministry of Law.

(b) The problems of land acquisition and other coordination matters with State Governments and other agencies, such as Railways, MoEF are being taken up at the level of Committee of Secretaries headed by Cabinet Secretary, wherein the Chief Secretary or other senior officials from the State Government/Railways, MoEF, etc are being invited to solve the problems.

(c) The system of review at regular intervals by Nodal Officers of the State Governments for solving problems like land acquisition, removal of utilities, forest and environmental clearances, etc which was already in place has been revitalized. More frequent meetings are now taking place to sort out problems.

(d) The work of shifting of utilities is now being got done though the civil work contractors/concessionaires at the estimated cost given by concerned utility department under their supervision.

(e) A Director level officer of Railways has been posted in NHAI on deputation to liaise with various Zonal Railways to expedite approval of ROBs.

(f) The status of pre-construction activities is being reviewed and monitored in NHAI HQ on a fortnightly basis."

D. Quality of Work Executed

3.6 The Audit in Para 2.5 had observed that the quality of the construction was not found to be as per the technical specifications. In a test check of seven stretches by the technical audit team, the following deficiencies were noticed: -

Sl. No.	Nature of Defect	No. of Stretches
1	Reinforced Cement concrete work in retaining wall and cement concrete kerb were sub-standard.	2
2	Weep holes provided in retaining walls for allowing water to escape without damaging the structure were not provided as per technical specifications.	4
3	Various road layers were not compacted to the required degree and their thickness was also less than the required.	In some cases
4	River Shingles used in wet mix macadam for service lane did not meet the technical specification.	1
5	Longitudinal drains were not provided.	3
6	Works executed by the contractors for a value of Rs. 40 crore were not confirming to the specifications such as non-provision of wearing course, premature distress due to unsuitable mix, inadequate strength for cement treated sub-base, construction of tilt/shift beyond the tolerable limits and use of inferior grade of Geo-textile Material.	5

3.7 It was reported that NHAI had got conducted quality audit in respect of works executed by the contractors (Tabular description of sub-standard work is given in **Annexure-III**). On being asked about the scope and methodology adopted by NHAI for these quality audits, it has been submitted that: -

"The scope of audit involves quality audit and surveillance works of Highways & Bridges under National Highways Development Project (Golden Quadrilateral and North-South & East-West Corridor Projects)

to confirm that the work has been executed as per specified parameters and quality system adopted for the execution of the projects. M/s Engineers India Ltd. (EIL) was awarded the contract for conducting such quality audits, initially for 38 packages, which was further extended for another 39 packages. They have conducted quality audit for 70 packages till date. Another contract has been awarded to M/s Gujarat Engineering Research Institute, Vadodara for 3 packages in Gujarat.

As far as the methodology is concerned, M/s EIL is required to interact with the officers of NHAI, prepare audit plan and check list based on contract documents between NHAI & the Contractors and NHAI & the Supervision Consultants, to carry out quality audit in the office of the Contractors and Supervision Consultants and submit the initial report to NHAI, the Contractor and the Supervision Consultant to enable them to take up the corrective actions based on the non-conformities pointed out by the audit team.

On receipt of the confirmation from Project Directors (NHAI) in respect of the rectifications of the deficiencies carried out by the contractors, a follow up audit is conducted by the Auditors to review the same and the final report is submitted for closure of the audit cycle."

3.8 On being asked in how many cases, deficiencies in the quality of construction were noticed by these quality auditors, NHAI replied: -

"Some defects / deficiencies / non-conformities were observed by the audit team in about 20 stretches (such as Jallandhar Bypass section of NH-1, Mukarba Chowk to Mall Road on NH-1, Agra-Gwalior section of NH-3, Sikandara-Bhaunti section of NH-2, Bhaunti- Fatehpur section of NH -2, Varanasi-Mohania secrtion of NH 2, Mohania-Sasaram section of NH-2, Dehri-on-sone to Aurangabad on NH-2, Aurangabad-Barwa Adda section of NH-2, JNPT Pkg-1, Vizag Port Road project, Eluru-Ravalaplem, Jaipur Bypass on NH-8, Bhilwara Bypass, , Kolaghat-Kharagpur section of NH-6, Laxmannath-Kharagpur, Nasirabad-Gulabpura, Bhilwara Bypass-Chittorgarh, Palikonda-Ranipet and Dharwad-Belgaum section of NH-4, etc.)."

3.9 On being asked about the action taken by the NHAI/Ministry against the concerned contractors and the PSCs responsible for execution and supervision where poor quality of work was noticed, NHAI stated: -

"All the non conformities/defects as pointed out by the audit team during their audit have been rectified by the Contractor and the Consultants, except in 4 cases where follow-up audit to verify the rectifications carried out is in progress."

3.10 On being asked as to what corrective action was taken to raise the quality of road construction to the requisite optimum level, what were the costs involved to set right these deficiencies and by whom such costs were made good, NHAI submitted that: -

"In order to exercise an effective control on the quality of the road construction, guidelines have been issued to all the Project Implementation Units covering the general types of deficiencies observed during the audit for taking corrective actions. The costs of setting right the deficiencies are borne by the contractors and are not paid by NHAI."

3.11 The Ministry in their written reply stated on the same issue that: -

"Under the FIDIC terms of work execution, contractor is responsible for the quality of work executed. This is also ensured through supervision consultant. Now NHAI has also adopted the practice of quality audited by a third party external agency."

E. Synchronization of Activities

3.12 According to Audit, there was no synchronization of activities and there was ineffective coordination with other agencies like shifting of utilities, cutting of trees, etc. When the reasons for incorrect and incomplete data in the DPRs, delay in finalization of DPRs and award of work were asked, NHAI has replied: -

"It may not be correct to conclude that there was no synchronization of the activities and that there was ineffective coordination with other agencies for land acquisition, shifting of utilities, cutting of trees, etc. It may be appreciated that the program of this magnitude was unprecedented. The scale and quantum of pre-construction activities required for these projects was unmatched to any project implemented in the past. It was not possible to undertake the activities in a serial manner, that is to say, complete the pre-construction activities in the first instance and only then undertake the construction activities. It was, therefore, decided to take up the pre-construction as well as construction activities simultaneously, but matching with the sequence

of the construction activities of the contractors. Moreover, the entire site was not envisaged to be handed over at the time of commencement of work but in phases. On hindsight, it can be said that it was not a wrong decision. Even today, about 2 % of the land acquisition remains to be completed while nearly 93 % of GQ is already complete. Had the activities been taken up serially, the benefit of GQ, which is being derived today, would have been denied all these years. Since most of the pre-construction activities depended upon the cooperation of the respective state governments, there were delays where such cooperation was not forthcoming. To undertake work of this magnitude, not only the support of the State Governments was very vital, but also they required physical and manpower resources to undertake this type of work at the pace required for implementation of NHDP. Most of the State Governments were not equipped with the resources required for undertaking such huge pre-construction works. It needs to be noted that land acquisition, which is considered very critical for these projects, got affected due to non-availability and non-updation of the land records by the State Governments. It was only due to the effective coordination by NHAI and due to supplementing the resources of the State Governments; NHAI could complete these pre-construction activities.

As regards DPR, despite all efforts some discrepancies in the DPRs cannot be ruled out. Further, some DPRs got prepared by the State PWDs were also adopted by NHAI in which a large number of discrepancies were observed. It has been the experience that the assessment of the pre-construction activities, especially with respect to land acquisition, requires updated and correct land records which normally was not available with most of the State Governments. As a result of the complex land acquisition process, where certain areas were in the process of consolidation or under disputes in the Courts of Law, it was not possible for the DPR consultants to ensure complete accuracy of the LA plans at the time of preparation of DPRs. The DPR consultant carried out survey of the alignment but due to the reasons explained above, there were differences in the LA plans and the actual site condition. These discrepancies were possible to be rectified only at the time when the Revenue Authorities started acquiring the land under the NH Act. The discrepancies in the DPRs were also due to the issues which came up during the implementation of the projects such as requirement of additional underpasses, bypasses, avoidance of certain areas for minimizing the cutting of trees, structures, properties, etc. While it did not imply that DPR consultants did not carry out intensive consultations at the time of DPR preparations, the change in some of the provisions was necessitated due to the reasons explained

above and hence, was required to be accommodated during the course of implementation.

Moreover, the shifting of utilities is also linked to the process of land acquisition. Only after acquiring the land, it was possible for the utility agencies to commence the shifting work. Further, the possibility of uncharted utilities outside the utility relocation plan submitted by the DPR consultants and found during the course of actual execution cannot be ruled out.

These factors led to a delay in finalization of some of the DPRs."

3.13 From the Audit Report, it was noticed that planned construction period ranged from 30 to 36 months for each stretch depending upon the work involved in the length of the stretches and number of bridges, culverts etc. In this regard, the NHAI was asked to state the reasons for abnormal delays in completion of the work. NHAI furnished the following reply: -

"Generally, the implementation of a project takes about 30-36 months (in some cases even 42 months) depending upon the work and the complexities involved in the project. However, this is also subject to the condition that the pre-construction activities (such as land acquisition, utility shifting, etc.) are completed well in time so as not to affect the construction program.

NHAI had to face a number of constraints in implementation, which affected the progress of the projects. These are-

(a) There were inordinate delays in acquisition of land due to procedural formalities, litigation and court cases, delays in disbursement of compensation by the Competent Authority to the beneficiaries although NHAI had deposited the compensation well in advance, etc.

(b) There were considerable delays in getting the forest clearance. Further, besides the conditions stipulated by the Central Government in first stage clearance, the State Forest Departments also imposed certain additional conditions, which were, at times, unreasonable and difficult to meet.

(c) There were delays in obtaining clearances/approvals from the Railways for construction of Rail Over Bridges (ROB). Also, in packages where ROBs were constructed by the Ministry of Railways themselves, progress was not satisfactory leading to delays in completion of the projects.

(d) There were delays in shifting of utilities like, electric lines, water pipelines, sewer lines, etc. Moreover, shifting is also associated with acquisition of land and hence, there were delays in shifting of utilities due to delays in acquisition of land.

(e) In many states, works were affected due to adverse law and order conditions and activities of anti-social groups. Further, stoppage of work by the local population demanding additional underpasses/bypasses, flyovers, service roads, were also frequent.

All the above issues delayed the construction work, which were beyond the control of the construction agencies and hence, affected the completion of the project."

3.14 On being asked as to why the revised target date of end of December 2005 could not be adhered to, NHAI stated that: -

"While a majority of the projects have been completed by December 2005, some of the projects could not be completed due to the following reasons-

(a) Some of the projects under the assistance of the World Bank could be awarded only in 2004 after completion of all the formalities including obtaining necessary no-objection / clearances of the World Bank. These projects would normally require about 30 months' time for completion.

(b) In some of the projects, where the performance of the contractors was poor or where the bank guarantees were found to be forged, the contracts were terminated and fresh contracts could be awarded only in 2005 (some in early 2006), due to consequent protracted litigation/arbitration, with a completion period of about 24 months.

(c) In some of the projects, the progress was poor due to tardy implementation by the contractors. Seventeen contractors have

been declared non-performers. The completion of works in these projects has been delayed.

(d) Frequent stoppages of work by the local population demanding additional underpasses/bypasses, flyovers, service roads, have also contributed for delay in completion of the projects.

(e) There were inordinate delays due to land acquisition, shifting of utilities, tree cutting, adverse climatic conditions, etc. These affected the progress of the projects."

F. Role of Government

3.15 When asked whether the Government had monitored the progress of the work and issued any instructions to the NHAI in respect of slow progress, NHAI on their part replied that: -

"The implementation of the projects was reviewed on a periodical basis by the Ministry of Road Transport & Highways at the level of the Hon'ble Minister and Secretary (RT&H) so as to take immediate measures to remove bottlenecks and to ensure the speedy progress of the projects. Further, the monitorable targets as per the program approved by the Government as also as per the Annual Plans were reviewed in various meetings held in the Planning Commission, Ministry of Road Transport & Highways and Ministry of Statistics and Program implementation. The decisions taken in such meetings were followed by NHAI."

3.16 On the above issue, the Ministry has stated as under: -

"Ministry has a separate zone to deal with the matters relating to NHAI. NHAI furnishes its monthly progress report to all concerned including Ministry of Statistics and Programme Implementation, Planning Commission and Ministry of Finance. Besides, each and every project is periodically reviewed by Secretary as well as Minister. Interaction with NHAI is constantly maintained, more so on issues such as representation from public on matters relating to land acquisition, coordination with external lending agencies and issues arising due to procurement procedure. If the need arises suitable instructions to NHAI are issued by the Ministry on technical, administrative and procurement issues."

G. Loss in vehicle operating cost

3.17 The Audit in Para 2.2 of the Report has observed that the delay in completion would also result in non-accrual of perceived benefits in terms of vehicle operating cost to the extent of Rs. 4, 289 crore (ending December 2005) to the road users and loss of savings in time and avoidance/reduction in accidents.

3.18 In this connection, NHAI was asked to tender their justification on the matter. NHAI submitted: -

> "Over the years, the industrial and agricultural growth of the country led to a growth in traffic of about 8-12% per year on many sections of the national highways. While traffic on the national highways grew rapidly, it was not possible for the Government to ensure the proper development and maintenance of the national highways for want of matching funds due to competing demands from other priority sectors. This led to serious deficiencies in the network, which affected the economy badly. In order to achieve an average GDP growth rate of about 8% per annum, a good national highway network was a sine qua non.
>
> In view of this and to give a boost to the economy, there was an emergent need to take up implementation of a mega project covering 6,359 km. Implementation of NHDP in a time frame of about 3-4 years was a mammoth task. A project of this size and complexity was unprecedented in the history of the road development in the country. Not many countries in the World have ventured into such a massive task to be completed in such a short time.
>
> The overall performance of NHDP Phase-I suffered in the initial stages due to problems on account of land acquisition, utility shifting and getting forest/environmental clearances, etc. Moreover, during the initial stages, NHAI did not possess the requisite infrastructure and the wherewithal to undertake a project of this magnitude. However, concerted efforts were made to resolve the issues relating to pre-construction activities as also to introduce robust systems and procedures. Deficiencies in planning and contract management, which had crept into the initial stages mainly on account of lack of experience of handling projects and program of this magnitude, have since been considerably removed.
>
> A project of this size and scale is bound to encounter practical difficulties, which cause delays. The factors causing delays were even

beyond the control of NHAI. However, NHAI has always been vigilant about the delays and has been taking all possible steps to control slippages so that the projects are completed as per schedule.

While there are several economic and social benefits of good road network which include saving in fuel, saving in vehicle operating cost and maintenance of vehicle, saving in time; it would not be proper to compute loss on these counts due to delay in completion of the project and hold NHAI responsible for this. A successful completion of the project depends largely on various factors including factors, which are beyond the control of NHAI. Had NHAI taken up the work only after completion of the pre-construction activities, there would have been a further delay in implementation and hence, lesser benefits. However, by taking up both pre-construction and construction activities simultaneously, the benefits would be more as compared to the previous situation.

Hence, the delay in implementation of the project which is mainly due to reasons beyond the control of NHAI has delayed accrual of perceived benefits."

3.19 During evidence of the Authority, when queried on the issue of delay of NHDP, Phase-I, the Chairman, NHAI stated: -

"Sir, about the points raised by the Hon'ble Chairman, I would like to say that the chief hurdles as on date in the operations of our National Highways are land acquisition, cutting of the trees, shifting of the utilities, local problems, shifting of the religious structures and law and order problem in certain areas. They still remain as the chief hurdles. I am to say that the hurdles that were there at the time of Phase-I still remain. Though the Committee set up at the Cabinet Secretary level for Inter-Ministerial coordination, Centre-State coordination has resolved this issue to some extent yet we still face problems in land acquisition in different States. Sometimes, the land acquisition officers are transferred frequently or are not available. We have been requesting the State Government to lay special emphasis on land acquisition for the National Highway Projects so that we can expedite work. Then comes the disbursal of compensation after it is deposited with the competent authority within the shortest possible time. The point is that people will not leave their land unless compensation is paid to them. So, once that is delayed, the land acquisition process is delayed. Once the land acquisition process gets delayed, then the whole thing gets stalled. Hence, the chief hurdles still remain."

3.20 It was added by a representative of NHAI, that: -

> "There was a question regarding the shortage of construction material. Here I would like to add that we are preparing our DPR and we do the survey of the locality where the minerals, quarry, sand, stones and other things are available. This has been duly considered while floating the work to contractor and that whatever materials to be required are made available. What happened is that when the contract is awarded and the work starts taking place, then sometimes with the State Government's legislation or maybe local problems or maybe some forest problem, most of the quarries, which have been identified by the contractor and by NHAI, are not available to us. This creates some problems. It happened in the case of a project in Orissa and also in some other projects while we were doing the Golden Quadrilateral project. But by and large, unless there is some change of legislation and things are not available, we do not face this type of problem. This may cause delay if things are not available as per the contract."

3.21 The Chairman, NHAI further added: -

> "There is another aspect, which I forgot, that is, regarding why delays take place. In quite a number of places, we find there is a lot of demand from the local population for additional under-passes, change in design, additional ramps, grade separators, etc., which involve additional cost. So, whenever there is a change in scope, there will be change in cost also. So, escalation will take place. That is, by owing to popular demand wherever we find that there is a necessity, sometimes change in design has been effected with consequent variation and escalation cost. That has happened. In Surat-Manor's case, this has happened."

H. Delay on Account of Land Acquisition

3.22 According to the C&AG Report, 90% of the land was already acquired as on October 1998, when the NDHP Phase-I was sanctioned by the Government. However, according to NHAI, one of the main reasons for delay in completion of NHDP has been due to the delay in acquisition of land on account of procedural formalities, litigation in court cases, forest clearance, approval from Railways for Rail Over Bridges (ROBs), shifting of utilities, adverse law and order conditions in some States, etc. In this regard the Ministry was asked to state as to what was

the factual position regarding the said observation of C&AG and if this was correct, then how the project got delayed on the above mentioned accounts. It was also asked what role was played by the Government for removal of the above-mentioned obstacles and also to coordinate matters with State Governments and other agencies like Railways, Ministry of Environment and Forests, etc. to solve the problems.

3.23 The Ministry replied the following: -

"The actual execution of the project is the responsibility of NHAI which is a statutory body. NHAI had reported that approximately 90% of the land was available but the remaining 10% was quite critical for completion of the project. Four and Six laning facility had/ has to have a particular cross section which required/ requires adequate width to be available in order to execute the work. Wherever the required width was not available it was not possible to take up the work. This had caused delays despite NHAI pursuing the matter relating to land acquisition, utility shifting etc. with State Govt. vigorously.

Ministry also pursued with concerned State Governments. A number of letters at the level of Hon'ble Minister to Chief Minister of concerned States were written. The letters were also got written from Prime Minister to Chief Minister of some States where the problems were more acute. As a result of this, following actions materialized for facilitating the speedy decision involving number of States and other Central/State agencies:

(i) Committee of Secretaries constituted under Cabinet Secretary to resolve Centre-State and Inter-Ministerial issues with periodical meetings;

(ii) A Nodal officer appointed in every State to coordinate and to solve problems relating to land acquisition, removal of utilities, forest and environment clearances etc.

(iii) Allocation of Business Rules modified so that DORTH authorized to issue notification for LA without reference to Ministry of Law.

(iv) Periodic review meetings were earlier held between Secretary and Member Engineering, Railway Board on the issue of speedy approvals for ROBs. Now, a Director level officer of the

Railways has been posted in NHAI on deputation for liaisoning with various zones of Railways to expedite approval of ROB.

(v) M/o Environment & Forest has simplified the procedure of speedy clearance by having frequent meeting of their committees."

3.24 The Secretary, Ministry of Shipping, Road Transport and Highways further added during the evidence that: -

" …..As far as land acquisition is concerned, it is a matter of great concern to the Ministry. It is also something with which the Ministry is closely involved because the issues vary from State to State. In fact, the Minister himself has been visiting State Capitals and hold meetings. Recently, I accompanied him to Lucknow for a meeting with the State Chief Minister because of the problems of delay in the acquisition in U.P. I myself went to Chennai the other day to attend the meeting convened by the Chief Secretary of all land acquisition officers so that all our works could be speeded up. So, we certainly do follow this very closely with the agencies concerned. It is not that any individual State gets more attention than any other. We try to look at the States where, in fact, the land acquisition has been delayed and we address those on priority. As far as the Land Acquisition Act is concerned, in fact the NH Act does provide for its own acquisition. But there is nothing to preclude the application of the Land Acquisition Act of 1984. Actually State Governments ask us for clearance under that Act, to which we have no objection. In fact, at present for the East-West Corridor, Assam has asked for permission to acquire under the Land Acquisition Act, to which we have agreed to. Jammu and Kashmir has its own Land Acquisition Act. It does not use either of these two Acts. Clearance has been given to them also. So, we are absolutely open on this matter."

3.25 On being enquired by the Committee as to whether any delay occurred on account of inaction by the State Governments in respect of land acquisition, utility shifting, etc and if so, whether such instances were brought to the notice of the Central Government, and the remedial role, if any, played by the Central Government, NHAI replied as under: -

"Yes, the delay occurred on account of inaction by the State Governments in respect of land acquisition and utility shifting, etc. Most of these pre-construction issues relate mainly to the State Governments and were being taken up with the concerned State

Governments from time to time. All the concerned States were requested to nominate a senior officer as the Nodal Officer for NHDP, which was done. The Nodal Officer was expected to coordinate various matters relating to the programme with the departments of the state government and also hold periodic meetings to review all issues affecting the progress of works such as acquisition of land, shifting of utilities, forest clearance, tree cutting, law and order, etc. This arrangement facilitated resolving large number of issues at the field level. The matter was also taken up by the Hon'ble Prime Minister and Hon'ble Minister (RT&H) with the concerned Chief Ministers. In addition, to resolve the issues related to Central – State and Inter-Ministerial coordination and for expediting the pending cases which were affecting the progress of work, a Committee of Secretaries (COS) was constituted headed by the Cabinet Secretary. The outstanding issues related to land acquisition were raised before the COS."

3.26 In their post evidence note, NHAI put forth their suggestions about bringing the following amendments in the National Highways Act, 1956 in respect of land acquisition: -

"Amendment required for Land Acquisition:

To facilitate the acquisition of land expeditiously for the NHAI projects, the following needs to be added under Sub-section 7 of Section 3-G NH Act, 1956:

(1) In addition to the market value of the land, the Competent Authority or the Arbitrator shall in every case award a sum of 30 per centum on such market value, in consideration of the compulsory nature of the acquisition.

(2) The 1956 Act does not specifically provide for a time limit for initiating the arbitration proceeding challenging the compensation determined by the Competent Authority. There have been instances where interested persons have challenged the awards determined by the competent authority after two years which not only delays the completion of the LA process but also creates administrative problems. It may be better to prescribe a time limit for the interested persons for challenging the compensation award before the Arbitrator. Following need to be added in the NH Act: -

"Provided that every such application shall be made -

Within six months from the date of the Competent Authority's determination."

(3) To include acquisition through mutual consent to a limited extent only in the following cases:

(a) Missing plots which are left out from the bulk acquisition.
(b) Additional land required due to alteration of alignment at implementation stage.

To adopt this process, adequate protective mechanism would be put in place for ensuring transparency in the rates and for establishing rightful ownership.

(4) Explore the possibility of invoking urgency clause, as in case of LA Act, for faster LA process in some special cases."

IV. CONSULTANTS AND CONTRACTORS

A. Detailed Project Reports (DPRs) and DPR Consultants

4.1 A three-stage procedure was uniformly adopted by NHAI in evaluating the proposals received for selection of DPR Consultants through competitive bidding using Quality and Cost Based Selection (QCBS). As pointed out by Audit, DPRs were found deficient in terms of precise determination of quantities and nature of the items of works, land to be acquired, sub-soil investigation, bridge design, correct technical specifications, number of trees to be felled, services/utilities required to be shifted, and designs of various key items of work. The inaccuracy in the quantities of works upset the competitive rates of the bidders, which formed the basis of award of contracts in one case.

4.2 When asked about this issue, NHAI submitted in their written replies that: -

> "The agreements have since been standardized and the following penalty / deterrent provisions have been included in the standard contracts-
>
> - An amount equivalent to 5% of the contract value is retained at the end of the contract for accuracy of design and quantities submitted and the same is released after the completion of Civil Contract Works (Clause 7.2). Further as per Clause 7.3.1, if variation in any of the main quantities of work like earth work including sub grade, GSB, WMM, Bituminous works (BM/DBM/BC), drains, total concrete quantities and reinforcing steel in bridge works or overall project cost, found during execution is more than +/- 15%, the penalty equivalent to 5% of the contract value shall be imposed. For this purpose retention money equivalent to 5% of the contract value will be forfeited. This shall exclude any additional/deletion of items/works ordered during the execution.
>
> - In case of delay in completion of services due to reasons attributable to the Consultant, a penalty equal to 0.05% of the contract price per day subject to a maximum 5% of the contract value can also be imposed and shall be recovered from payments due/performance security.

- In addition to the penalty as mentioned above, warning may be issued to the erring consultants for minor deficiencies as per Clause 7.4.2 of DPR Consultancy Contract. In the case of major deficiencies in the Detailed Project Report involving time and cost overrun and adverse effect on reputation of NHAI, other penal action including debarring for certain period may also be initiated as per policy of NHAI.

- To prevent frequent changes of key personnel by the Consultants, a contract condition has now been provided where the upper limit of substitutions has been fixed at 25% of total key personnel. For any substitution beyond this limit, penalty is imposed in the form of reduction in remuneration of the new key person proposed.

- Submission of performance security has been made mandatory, which is retained till the completion of the Civil Works."

4.3 During the evidence of the representatives of NHAI, the Chairman, NHAI also submitted the following: -

> "The other thing is, whether appointment of consultants has been done in following a proper procedure and all that. I would like to submit that we have followed well laid-out procedures for appointment of DPR Consultants as well as Project Supervision Consultants. You will realise our difficulty because when we took up this massive project, there was a real dearth of such consultants and such expertise in our country. So, that has been a bottleneck in Phase-I. We have faced this difficulty because this expertise has to be developed. Suddenly there was a large requirement of Highway Engineers, Bridge Engineers, Quality Surveyors etc. So, it was very difficult to get so many people at the same time, but we had well laid-out procedures for appointment of DPR Consultants."

4.4 In the post evidence note submitted by NHAI, further clarification was forwarded by the Authority regarding lacunae found in the work of the DPRs: -

> "The contract prices going up due to variations either by increasing the quantities of work or by getting additional items of work executed is one area, which gives rise to the suspicion that the contractor has been favoured. The fact, however, is otherwise. There are many reasons for such variations, such as (a) quantities in highway projects cannot be estimated with full accuracy, (b) the site conditions dictate some changes from the original quantities, (c) at times additional facilities are created due to public pressure, (d) additional items are included from operational and safety considerations not envisaged at

DPR stage. In addition, as stated earlier, in a number of cases, the bids were called without DPR being ready on approximate quantities. As a result, the quantities increase or decrease with respect to the contract quantities. The test whether such increase or decrease has been made with the intention of giving any undue benefit to the contractor would lie in determining (i) whether the variations were justified or not, and (ii) whether these variations have been costed in accordance with the laid down procedure or not. It may be stated that NHAI has considered the instances of these variations at the highest level in the management and applied due diligence in approving these variations. There have been instances where DPRs have been found wanting and actions have been taken against the defaulting DPR consultants. The value for money has been secured.

The system has since been further streamlined by tightening the system of DPR preparation, providing for peer review of DPRs and associating the field officers of NHAI in preparation of DPRs."

4.5 When questioned about their role in monitoring this issue, the Ministry in their written reply answered that in the year 2001, they appointed a Committee under the Chairmanship of the then DG (RD) for standardizing some documents and procedures relating to procurement of services of consultants and evaluation etc and also that Detailed Project Reports are now subjected to Peer Review by experts; that major structures are also proof checked.

B. Project Supervision Consultants (PSCs)

4.6 Audit in Para 7.2 has brought out the following deficiencies on the part of the Project Supervision Consultants (PSCs): -

a) Project Supervision Consultants (PSCs) failed to demonstrate efficient contract management abilities as non-compliance to contractual provisions resulted in losses and extra payments.
b) Despite contractual requirement for recovery of liquidated damages for delayed execution attributable to the contractors, the recovery was not proposed resulting in non-levy of Rs.51.49 crore.
c) The PSCs ordered execution of variation items in respect of two stretches without the prior approval of NHAI and also at rates higher than those

subsequently approved by NHAI, resulting in overpayment of Rs.5.89 crore which could not be recovered from the contractors.

d) The PSCs did not conduct 8 out of 14 mandatory tests in two stretches. The modified bitumen used at site failed in four out of seven tests conducted by technical audit.

e) The PSCs were contractually bound to obtain quality assurance plan/ procedure from the civil contractor and ensure its execution but the PSC failed in his duty in this regard.

4.7 When asked to comment on the above-mentioned Audit observations, NHAI in their written reply submitted the following: -

"Specific views on each of the observations are given below:

(a) Though conceded that there were some instances of non-compliance, but a sweeping generalization would be unfair, especially keeping in view the fact that many projects were completed almost in time and within cost, and in some cases the contractors got bonus also for early completion.

(b) Audit's observation about the loss is based on the premise that the extension granted to the contractors was not at all due. However, this position has been contested by NHAI in various references stating that there were various events which were beyond the control of the contractors and hence, as per the conditions of the contract, extension of time was granted. As regards non-levy of Rs.51.49 crore, it may be stated that in one case, involving Rs.19.86 crore, the matter is pending outcome of arbitration. In another case where Rs.11.09 crore is to be recovered, the amount is secured by extended BGs furnished by the contractors pending outcome of the arbitration process. In the remaining, the extension of time was justified and hence, liquidated damages were not leviable.

(c) This has already been referred to Arbitration and the outcome of this is awaited.

(d) The main observation relates to testing of bitumen. In NHAI's reply earlier, it had been clarified that while penetration and softening point tests were carried out, for other tests manufacturers' certificate was relied upon. Moreover, testing done by CRRI was

done on a sample after considerable lapse of time since actual laying. Due to ageing, the characteristic of Bitumen would change.

(e) On earlier observation of the Audit, NHAI had clarified that the quality assurance manual was submitted by the contractor along with the tender. Besides this, PSCs also prepared a quality assurance plan for implementation and quality control of the work was carried out as per that plan, in association of the contractor. The same position is reiterated."

4.8 In this connection, when asked what were the contractual provisions entered into by NHAI with the PSCs, NHAI stated: -

"….as per contractual provision under the Supervision Consultancy contracts, the Consultants are required to administer the civil works contracts as per provisions of those contracts as well as the specific contract between the Consultant and NHAI. As per civil works contracts, the Consultants are to give commencement orders, review the contractor's work plan, monitor the progress as per the programme and pinpoint the delays, approve construction drawings, check the measurements of work, certify the monthly payments due to the contractor, approve variations, approve extension of time, decide on the claims made by the contractors including those on which he intends to go for arbitration, certify the statement at completion, certify the final payment certificate, ensure compliance of the defect liability and issue defect liability certificate. The agreements limit the role of the Consultant in respect of such matters, which have direct financial implications, such as extension of time and approval of variations, in which the Consultant is required to take the approval of the client, i.e. NHAI. The earlier contracts with supervision consultants did have some weaknesses inasmuch as the requirements of seeking client's approval were not very clearly spelt out. These weaknesses have now been removed and the standard contract documents for civil contracts as well as consultancy contracts have made explicit provisions in this regard."

4.9 When asked about what mechanism was / is available with the NHAI to ensure compliance of the contractual provisions with the PSCs they stated: -

"The contracts with PSCs will be enforced and where they are found to be in breach, remedies available in the contract will be resorted to. The remedies are encashment of bank guarantees, recourse to Professional Liability Insurance. Beyond the contractual provisions also, action can be taken against erring consultants as per the policy recently formulated by NHAI. As per the policy, the performance of the

consultants is reviewed and those whose performance is lacking can be warned, debarred for a period of one year or more depending upon the severity of the non-compliance."

4.10 On being asked about the quantum of net losses incurred by the NHAI on account of failure of some PSCs to discharge their obligations satisfactorily in accordance with the contract agreement, the Authority stated: -

"Generally, no loss was allowed to be incurred on account of any failure on the part of the PSCs. Wherever the work did not conform to the specifications, either suitable recoveries were made from the contractors or the defects were got rectified by the contractors at their cost."

4.11 When asked about the deficient role of the PSCs, the Chairman, NHAI, during evidence replied thus: -

"The same thing has been done in the appointment of Project Supervision Consultants where their key personnel is the most important factor because they are the people who really supervise the work at site, approve the work plan, give day-to-day guidance to the contractor to undertake the project as well as see that all the records and measurement books are properly kept to be again checked by the concerned Project Director. For that, we see that the key personnel are not shifted very often. We have restrictions on that. We have restriction which says that they should not be shifted beyond 25 per cent. If they are shifted and that shifting ranges from 25 per cent to 33 per cent, then 5 per cent remuneration is reduced, if the shifting ranges from 33 per cent to 50 per cent, 10 per cent remuneration is reduced and if the shifting goes beyond 50 per cent, we start action for issuing show-cause notice and debarring. So, it is very stringently specified that our quality of work should not be affected due to change of personnel.

So, I would like to submit that we have followed very well laid-out guidelines in spite of the difficulties in getting so many DPR Consultants and Project Supervision Consultants in one go, but we have followed well laid-out procedures which have been outlined in our note for selection of these people. But it has been a fact that some of them had not performed to our satisfaction. In all such cases, wherever we have found such cases we have taken action for the debarring of the Consultants or imposing financial penalties on them."

C. Contractors

4.12 NHAI was asked that before awarding the contracts, how was it ensured that the concerned contractor had the ability to mobilize the required resources for executing the work in the light of the observations made by the Audit? In reply, they stated as under: -

> "The contracts are awarded by NHAI by adopting the following procedure:
>
> (a) Pre-qualification of Bidders based on clearly laid down criteria of experience & turnover, personnel capability, equipment capability, financial capability, bid capacity, litigation history, etc.
> (b) Invitation of Bids (Technical Bids & Financial Bids) from eligible pre-qualified Bidders.
> (c) Opening of Technical Bids and their evaluation.
> (d) Opening of Financial Bids of those whose Technical Bids have been found responsive and evaluation of financial bids.
> (e) Work awarded to L1 Bidder as per CVC guidelines.
>
> As can be seen from above, the criteria for pre-qualification of bidders establish ability of the Contractor to mobilize the required resources for executing the work."

V. STANDARDIZATION OF STRETCHES

5.1 According to the Audit observation contained in Para 4.2, the cost in nine contracts in three sets of contiguous stretches awarded concurrently varied widely from Rs.1.86 crore to Rs.4.20 crore per km. This indicated deficient contract system, non-standardisation of contract price per unit length under similar site conditions etc., and was against Government directive, which mentioned that NHAI should compare cost of the stretches on a like to like basis and analyse the reasons for substantive variation. In the absence of standardisation of stretches, NHAI should have devised effective cost control system to address such variations. Further, as per the latest information available with the Audit, NHAI was yet to standardise the stretches or the Bill of Quantities (BOQ).

5.2 When asked to comment on the above observation by Audit, NHAI in their written reply stated: -

> "NHAI had expressed reservations about the feasibility of implementation of C& AG's observations on standardization of stretches. While standardization has been achieved to the extent feasible by following a uniform policy on design standards and specifications in the field of highway construction issued by IRC, MoSRT&H, BIS, etc., standardization of the stretches on per km basis is not possible because of a large number of variables involved in the cost estimation of the project such as variation in number of major bridges/structures, length of service roads, composition of carriageway owing to terrain and soil conditions, traffic volume, distance from source of materials, local constraints in construction, etc. Similarly the project length also can not be standardized because it depends upon the distance between important places, capacity of the Contractors and need for a variety in contract packaging so as to offer an opportunity to contract executing firms having varying capacities and capabilities.
>
> Standardization of stretches is also not in vogue in States PWD or in respect of works awarded by Ministry."

5.3 The Ministry of Shipping, Road Transport & Highways also replied in the same vein as NHAI and stated the following: -

> "Standardization of stretches is technically not possible for highway projects. However, these were identified keeping in view the importance of connecting cities, ease of execution and technical/ financial capabilities of construction industry."

A. Standardization of Bill of Quantity

5.4 The Audit in Chapter-5 has observed that, in 23 stretches test checked, quantities per km of bituminous course and shoulders varied widely from 4 per cent to 1,280 per cent. The non- standardisation resulted in extra expenditure of Rs.260.98 crore. It was mentioned in the Memorandum of Important Points furnished by the C&AG that NHAI was yet to standardise the Bill of Quantities.

5.5 When asked about the reasons for such variation and corrective action proposed by NHAI for standardizing of Bill of Quantities, the NHAI in their written reply mentioned-:

> "It is not feasible to standardize the per km quantity of the bituminous work, as bituminous pavement thickness depends on various design parameter such as traffic density, type of terrain, soils, CBR (California Bearing Ratio-parameter for soil strength), climatic condition etc. Thus uniformity in thickness of bituminous layer in different packages cannot be achieved. Moreover the pavements are made as per actual quantities executed in different packages and there is no extra payment made to the Contractor. Further, assuming the lowest quantity per km in a particular stretch as a standard is quite misleading and would lead to unfair comparison. As such, quantification of losses accrued on account of variation in cost of construction of similar kind of stretches may not be feasible.
>
> At the same time, learning from the past experiences, DPR preparation exercise has been streamlined and the projects are being got Peer reviewed by experts before initiation of bidding process. The major structures are also got proof checked. Further, penalty clauses have been introduced in DPR consultancy contracts in case a variation exceeding $\pm$ 15%. In addition, the Variation Committee of NHAI at apex level examines and ensures that the variation in quantities is based on reasonable assessment and is allowed only if required."

5.6 The NHAI also stated that: -

"The model contract documents relating to execution of Civil Works Contracts have already been finalized adopted in NHAI. However…. it is not feasible to standardize the Bill of Quantity as envisaged by the Auditors.

The Standard bidding document stipulates (CoPA Clause No. 52.2) that "No change in the rate or price for any item contained in the BOQ shall be considered unless the actual quantity of work executed under the item exceeds due to any reason the quantity set out in the BOQ by more than 25% and if the cost of the additional quantity at the BOQ rate exceeds by 1% of the initial contract price, the Engineer shall fix the new rate to allow for the change in the quantity subject to restrictions under Sub-Clause 2.1, which requires the 'Engineer' to obtain specific prior approval of NHAI for issue of variations. The new rate fixed by the Engineer shall be applicable only to the quantity exceeding 1.25 times the BOQ quantity. Further, the possibility of fixation of new rate in case of reduction in quantities of existing BOQ items has been deleted.

The Engineer is now authorized to issue variation order upto 25% of the value of individual BOQ item or 1% of contract Value, whichever is less and he shall obtain prior permission from and specific approval of the Employer before issuing a variation under clause 51 except if such variation would be within the limits indicated above. It is added that as per clause 51.2 in GCC, no instruction for variation is required for increase or decrease in the quantity of any work if such increase or decrease is the result of the quantities exceeding or being less than those stated in the BOQ; however this has been deleted from the above sub-clause in COPA in the standard bidding document being now followed."

5.7 In their post evidence note on the issue of standardization of Bill of Quantity, the NHAI further submitted that: -

"The BOQ in which every bidder filed the rate of the item was at the heart of the bidding process. The quantities indicated in the BOQ were prepared by the DPR consultants on the basis of estimation of quantities of each item after preparing the Detailed Project Report. In some cases of the earliest projects, the bids were invited even before the DPRs were prepared and the quantities indicated in the BOQ were approximate. The reason for doing this was that NHDP was to be launched in January 1999 after its announcement in October 1998 and there was not enough time to have the DPRs prepared."

VI. TENDER EVALUATION SYSTEM

A. Bidding

6.1 According to Audit, NHAI did not follow uniform system for tender evaluation. It awarded two bids to second lowest bidders at their bid prices not following its practice to urge the second lowest bidders to match their rates with the lowest bidders who could not qualify due to lack of bid capacity. This departure from normal practice resulted in excess cost of Rs.16.95 crore.

6.2 In this connection, NHAI in their written reply submitted that: -

> "The Audit observations relate to packages I, II, and III of Surat-Manor project which were ADB funded projects. As per conditions stipulated in the bid, none of the bidders was eligible for award of more than one contract package simultaneously. One contractor was L-1 in all the three packages. The lowest bidder was eligible for award of only one package irrespective of being lowest in other packages since he did not possess bid capacity for other packages. Accordingly, the contracts were awarded to L2 bidders who were deemed to be the lowest bidders in respect of those packages. **The entire procurement was done as per the procurement guidelines of the ADB and the provisions for evaluation of bids prohibit negotiations with the contractors**. ADB approved the award of works. It may be mentioned that the contracts were awarded under the '**least-cost**' to NHAI method taking into account the three packages as a whole and there was no loss to NHAI."

6.3 NHAI further added the following in their post –evidence note: -

> "The straitjacketed view that contracts must invariably be awarded to the lowest bidder, and award to any bidder other than the lowest bidder must have been due to corruption motives needs to be rejected. It is not only the cheapest price that one looks for while awarding the contracts, but also the capability and capacity of the bidder to execute the contract. If a bidder does not meet the requirements clearly and comprehensively set forth in the bid documents, he has to be declared non-responsive and the lowest price quotation by a non-responsive bidder is of no significance. Therefore, the next lowest bidder does not have to match his price with that of the so-called lowest bidder.

One can argue that bid conditions can be specified in a manner, which leaves scope for manipulating the process of award and favour some bidder. It is categorically stated that NHAI only adopted the ICB procedure already being followed and did nothing of substance to change the ICB procedures.

The submission being made in the following sub-paras is that as per the prescribed procedure award of contracts did not necessarily have to be made to the lowest bidder.

(a) Inadequate bid capacity

ICB procedures required the bidders to possess a certain minimum experience, financial strength, and available capacity to bid for the work. As per the procedure, no work could be awarded to a bidder if his bid capacity was less than the cost of the work for which bids were invited, even if the bidder happened to be the lowest bidder. In such cases the bidder was to be considered a non-responsive bidder and his lower bid price did not entitle him to the award of work. In award of multiple packages, sometimes it so happened that some bidders quoted for more than one package and offered the lowest price, but could not be awarded all the packages for lack of bid capacity. In such an event the bidding procedure required that such bids be declared non-responsive and the next lowest responsive bidder be considered for award. The procedures did not permit that the second lowest bidder be asked to match his price with the lowest bidder. The logic of this is that once the lowest bidder is declared non-responsive, the price quoted by him is of little significance in determining the market price. There is a strong merit in this provision; otherwise some unscrupulous non-serious bidders could subvert the bidding process by quoting unrealistically low price difficult to be matched by the next lowest responsive bidder.

(b) Domestic Price preference

The bid conditions of the externally aided projects provided for a domestic price preference clause whereby a domestic bidder was entitled to award of contract if his price was within 7.5 % of the lowest foreign bidder. As a result, in some cases work was awarded to a bidder who was not the lowest. In the absence of any provision in the bid conditions for the winning bidder to match the bid price with the lowest bidder, the work was awarded to the second lowest bidder at his cost. On hindsight the provision of domestic price preference leading to award of work at a cost higher than the lowest price may look incongruous. However, in the past this provision had been made as a matter of policy only to protect the domestic bidders in an international competitive process, and even the external lending

agencies had accepted this. NHAI had simply followed the same conditions.

(c) Provisional sums and day work

As per ICB procedures, certain items were to be included in the bid as 'Provisional Sums' and 'Day Works'. The bidders were required to quote rates against these items and the employer was at liberty to get these items executed in full or in part or not at all. As per bid conditions, the prices quoted against these items were not supposed to be reckoned in the evaluation of bids. In some cases it turned out that the bidders ranking changed if the quotations of provisional sums were taken into account. That was ignored because this was not as per bid conditions. There is a sound basis for not including provisional sums in the evaluation process. If the conditions stipulated in the bid documents have been followed, it is not correct to view the award of such contracts as irregular just on the basis that the ranking of the bidders changed after taking into account the provisional sums items.

The instances cited above would give the impression that irregularities have been committed in award of contracts, which might be with corrupt motives. However, as explained above, so long as the bid conditions were followed strictly, motive of corruption would not hold. It may further be stated that such conditions were not imposed by NHAI themselves, but were already a part of ICB procedures, which NHAI had to invariably follow in case of externally aided contracts. Keeping in view the fact that these procedures were in vogue internationally, NHAI adopted them in non-externally aided contracts as well."

B. Customs/ Excise Duty

6.4 As stated by Audit, the Government exempted (August 1995) all goods supplied and machinery used in projects approved by it and funded by multilateral lending agencies like the World Bank and Asian Development Bank from levy of customs/excise duties. While calling for bids for stretches funded by the World Bank, NHAI failed to include a clause in the Notice Inviting Tenders that the bidders should quote the prices excluding customs/excise duties as exemptions were available to them. This resulted in undue benefit of Rs.30.69 crore to five contractors.

6.5 On being asked to comment on this serious observation, NHAI in their reply stated: -

> "As per the Government of India's policy, certain exemptions have been granted by the Government of India in respect of duty free import of goods, removal of goods without payment of excise duty, etc., for use of such goods for execution of the projects funded by the World Bank / Asian Development Bank and approved by the Government of India. As per this policy, exemption is available to all those who meet the requirements prescribed in the Government of India's exemption notification irrespective of any specific mention in the contract awarded by NHAI. Moreover, these exemptions already existed before the contracts were awarded to the contractors. It would, therefore, not be legal for NHAI to recover the benefit availed by the contractors in view of the exemption notifications of the Government of India since NHAI's action would restrict the benefit given by the Sovereign."

6.6 In their post evidence reply, NHAI further added that: -

> "….No bidder would risk loading his bid with these duties, which are exempt, and loose his competitive position with respect to other bidders. As such, the alleged overpayment arising out of this alleged act of omission has no sound basis."

6.7 In this regard, the Ministry in their post- evidence reply stated: -

> "As per the Government of India's policy, certain exemptions have been granted by the Government of India in respect of duty free import of goods, removal of goods without payment of excise duty, etc., for use of such goods for execution of the projects funded by the World Bank / Asian Development Bank and approved by the Government of India. As per this policy, exemption is available to all those who meet the requirements as prescribed in the Government of India's exemption notification irrespective of any specific mention in the contract awarded by NHAI. Accordingly, when the bids were invited, the exemption was already available in accordance with the Government of India's Policy and as long as there was no mention in the contract / bidding document that the exemption as per the Government of India's Policy would not be available to the bidders, the bidders were entitled for such benefit. Moreover, in the pre-bid meeting held with the prospective bidders, it was made clear to them that excise and custom duty exemption on all the material and equipment to be used for the project will be applicable as per the rules and concerned clause 73.4 of the Condition of Particular Application (COPA). As such, the bids/costing of the bidders were based on the fact that the custom and excise exemption as per the Government of India's notification would

be available to them. Further, this was also the basis on which the certificates were issued to the contractors of projects funded by World Bank/ADB to avoid the custom and excise duty exemption. The exemptions already existed before the contracts were awarded to the contractors.

Accordingly, it cannot be said that the action of NHAI resulted into excess payment to the contractors. Further, since the contractors availed the benefits as per the policy of Government of India, existing prior to entering into contract; it would not be legally tenable to deny this to the contractor."

VII. CONTRACT MANAGEMENT

A. Bank Guarantees (BGs)

7.1 The Audit in Chapter 7 of the Report had observed that the system of obtaining and verifying the Bank Guarantees (BGs) was not strong enough to ensure invoking BGs when required. NHAI had lost money in two cases. In this regard, the NHAI was asked to explain the purpose of obtaining the Bank Guarantees, how this system works for safeguarding the interest of NHAI and further, what justification NHAI had to offer on this observation of the Audit. In their written reply, NHAI stated that: -

> "In order to safeguard/protect the interests of the client (i.e., NHAI) from various risks/eventualities, conditions for submission of various bank guarantees (BG) exist in the contract. The types of the bank guarantees and the purpose for which they are asked to be submitted by the contractors/consultants are as under-

Type of Bank Guarantee	Purpose
Performance Security	This is required to be submitted to NHAI guaranteeing the successful performance by the contractors/consultants under the contract, failing which NHAI can invoke the bank guarantees to recover the damages suffered due to non-performance of the contractors/consultants.
Mobilization and Equipment Advance Bank Guarantees	Under the contracts, different upfront advances are required to be paid by NHAI, subject to recovery out of future running bills/invoices. Accordingly, these advances are paid against bank guarantees as security so as to protect NHAI in the event of default in repayment by the contractors/consultants.
Retention Money	This is required as security for release of retention money in cash and to protect NHAI in the event of non-rectification of defective works to be carried out by the contractors.
Bid Security	This is required to be submitted along with the bid so as to protect NHAI in the event of the successful bidder backing out and not signing the contract to execute the work.

In the present case, the bank guarantees were submitted by the contractors. However, later on the bank guarantees submitted in the case of six projects were found to be forged. When the matter came to the notice of NHAI, the contracts were terminated and NHAI, apart from filing FIR, initiated legal actions for recovery from the contractors against the forged bank guarantees. The matter is currently pending in Arbitration."

7.2 On being asked what steps have since been taken by the NHAI to strengthen the system of obtaining and verifying the Bank Guarantees (BGs)/ the NHAI replied that: -

"NHAI has since institutionalized a full proof system of verifying bank guarantees. Guidelines for strengthening the system of verification of the bank guarantees have been issued. As per the instructions, the issuance of bank guarantees (BG) is verified from the issuing branch as also from the controlling branch. As a matter of a full proof system, the issuance of the bank guarantees is got personally verified by an officer of NHAI before it's acceptance. Thus, a robust system of verification of the bank guarantees is in place. Since introduction of these measures, no case of forged BGs has been noticed."

B. Price Escalation

7.3 According to Audit observation in Para 7.1.2, the contract provisions in respect of 17 contracts in respect of the regulation of price adjustment due to escalation were inconsistent with the general conditions of contracts. In eleven contracts, the escalation was provided on all permanent works, variation items and day works. In two contracts escalation was provided for permanent and variation items and in fifteen contracts, escalation was provided for variation items only. NHAI erred in making different provisions in the contracts by not adhering explicitly to standard conditions. The ambiguity in the contract clauses in these contracts led to different interpretations. NHAI initially withheld the price escalation claims but subsequently released Rs. 120.08 crore as price escalation against receipt of BGs. The price escalation was paid with total disregard to the opinion of Ministry of Law (April 2004) that no price escalation was payable in these contracts. Similarly, NHAI allowed price escalation in 17 stretches in unit rates without deducting the profit elements from these rates due to defects in the

contract clauses, which resulted in avoidable overpayment of Rs.4.57 crore. As per the latest position indicated by the Audit, NHAI has standardized the clause 70.3 of Condition of Particular Applications (COPA), which regulates the price variations. In respect of recovery of Rs.120.08 crore, NHAI could collect only 11.52 crore and the balance is yet to be recovered (June 2006).

7.4 When asked why there were deviations in the contract clauses, NHAI replied that: -

> "The bidding documents were prepared based on the international standard bidding document similar to ADB / World Bank. This was adopted to have a uniform bidding offer from the Contractors from different countries as bids were being called at International level.
>
> Since a number of Consultants were involved in the preparation of DPR for the various projects, the escalation payment clauses in the bid-documents were worded differently in the draft bidding documents. Accordingly, in 15 of the civil works contracts falling under the Chennai-Kolkata section of NH-5 (Golden Quadrilateral), the escalation was not payable on permanent works as per the provisions of the contracts signed."

7.5 NHAI also stated that: -

> "The total amount paid to the Contractors against price escalation under the above 15 contracts works out to Rs.77.71 crore (and not Rs.120.08 crore as pointed out by the Auditors). Out of this, an amount of Rs.11.73 crore have already been recovered and balance amount of Rs.65.98 crore (and not Rs.108.56 crore pointed out by the Auditors) is to be recovered."

7.6 When asked what opinion was tendered by the Law Ministry on price escalation, NHAI submitted that: -

> "The Law Ministry opined that price variation is not available in those agreements where it is not found in the express language. As per the Law Ministry, every word in the contract has to be ascribed a meaning. Similarly, an agreement cannot be re-written by addition of any word and nothing more can be added to the agreement.
>
> NHAI paid price escalation to the Contractors pending opinion of the Ministry of Law, with the condition that the same would be recovered in the event of denial by the Ministry of Law.

However, after the opinion of the Law Ministry was received, NHAI took an immediate decision to recover the amounts already paid. Guidelines were issued to secure the price escalation and for recovery of amounts already paid once 75% progress is achieved subject to the condition that the entire recovery is completed by the time 90% progress of the work is achieved.

Accordingly, NHAI did not pay the price escalation in disregard to the advice of the Law Ministry."

7.7 On this issue, the Chairman, Audit Board stated: -

"Regarding payment of Excise Duty, it is not anybody's case that Duty should be paid. But the net effect of what has happened is that the contractors have received Duty from the Authority and also they again received the fund from the revenue authorities. So, they have really gained and the Authority has lost. The Authority has made payment which is not due because there is no exemption. This is what has happened. It has been our experience that this provision is a routine provision in case of Duty exemption and then the contractors are expected to refund to the Body who has initially paid it. It is a simple thing. There is no legal complication and things like that. I thought, it should be clarified and later on the Government can clarify it……..On the ground the contractors got the Duty exemption from the Authority and then they got the refund also. That is how it appears to me unless there is a very different kind of clarification. Secondly, regarding this case our only point was that this decision to pay could perhaps have been deferred……."

7.8 When it was asked by the Committee whether the Ministry and the NHAI could assure them that the amount would be fully recovered with interest, the Secretary Ministry of Shipping, Road Transport and Highways, replied: -

"Observation of the CAG is that this situation would not have arisen if the NHAI had adopted uniform and unambiguous contract provisions. This situation has actually arisen because the contract documents were imperfect. There was a flaw in it because of which the situation has arisen. This has come up before the Ministry on a number of occasions and the subsequent contract agreement drawn up by NHAI for the works which they are now executing would take care of recurrence of such matters. I think these took place in the earlier period of Golden Quadrilateral Projects. I do not think it would recur again. As far as this specific issue is concerned, every effort would be made by the Government. We would not want to put any rider in this

regard. We would do our best to recover it. It need not be stated that anything we do is subject to Court Orders."

C. Consultancy Charges

7.9 The Audit in Para 7.1.4 has observed that the Government had instructed (December 2000) NHAI to restrict consultancy charges to six per cent of contract price. However, NHAI did not evolve standardized price evaluation criteria resulting in failure to restrict the cost of supervision consultancy to six per cent. The actual percentage ranged between 1.49 and 11.16 in 32 cases. Higher cost of supervision consultancy in excess of Government's approval resulted in extra cost of Rs.22.35 crore in 12 stretches worked out with reference to the ceiling of six per cent.

7.10 NHAI in their written reply to this query clarified that: -

"While according the approval for implementation of NHDP Phase-I, an overall estimated cost of Rs.30, 300 crores was approved by the Government (i.e., the approval did not contain project-wise approval). The overall estimate of Rs.30, 300 crore included a provision for supervision consultancy @ 6% of the cost of civil works.

The cost of supervision consultancy across the projects, however, generally vary depending upon the size of the team required to be deployed, type of key-personnel required to be deployed, presence of international staff as part of the team (this is mandatory in the case of projects funded by the World Bank/Asian Development Bank/Japan Bank for International Cooperation) and the cost of the project. Accordingly, while in majority of the projects, the cost of supervision consultancy for each project has been less than 6% of the cost of civil works, in the case of some of the projects, the same is more than 6% of the cost of civil works for the reasons explained above.

However, the overall cost of supervision consultancy is within 6% of the overall cost of civil works (i.e., against a provision of Rs.1649 crores, being 6% of the overall awarded cost of civil works, the actual awarded cost of supervision consultancy is Rs.879 crore resulting into a saving of Rs.770 crore). Accordingly, this is within the approval of the Government."

D. Release of Retention Money

7.11 Audit in Para 7.1.6 has observed that NHAI allowed the release of Retention Money without adjusting the secured advances and without imposing interest.

7.12 When asked to comment on this observation of the Audit, NHAI stated that: -

> "The contracts signed between NHAI and the contractors provide for deduction of retention money at a specified percentage of the work done, to be released at the stages defined in the contracts. It was observed that different provisions existed for release of retention money. While some contracts prescribed for release of retention money secured against a bank guarantee at the option of the contractor, other contracts prescribed for release in only two stages after the completion of the project. This was unintentional. The matter was examined in detail by NHAI and it was felt that: -
>
> (a) There was a necessity to bring in uniformity for release of retention money against bank guarantees.
>
> (b) It was observed that the projects require adequate liquidity for keeping the progress of the project at a desired level after the recovery of the mobilization advances start. Accordingly, release of money at that point of time would help in improving the cash flow for the project.
>
> (c) Since NHAI is already accepting various bank guarantees as security under the contract, it was considered that the release of retention money against bank guarantee(s) would in no way dilute the issue of security available with NHAI.
>
> Accordingly, uniform provision for release of retention money at different intervals was prescribed. The release was made against submission of bank guarantees by the contractors. Subsequently, the release also attracted interest @ 6% pa."

E. Key Personnel

7.13 Audit in Para 7.2.5 has observed that the key personnel mentioned in the bid documents were changed frequently. The Ministry in their latest reply to

Audit has stated that additional security provisions including penalty were being introduced.

7.14 NHAI further clarified that: -

> "For any replacement of personnel (except for the reason other than death/extreme medical grounds/on client's written request), the remuneration to be paid to any of the key personnel provided as a replacement shall be 95% of the remuneration which would have been payable to the key personnel replaced. Further for total replacement up to 33% of key personnel remuneration shall be reduced by 5%, for total replacement between 33% and 50%, remuneration shall be reduced by 10% and for total replacement beyond 50% of the total of key personnel, action for termination/debarment of such Consultants for future projects of NHAI may be initiated.
>
> Further if it is found that the key personnel has left the project on his own at any stage, a show cause notice is issued by NHAI and thereafter the key personnel is debarred for future projects of NHAI for a period of at least one year."

VIII. TOLL REVENUE

A. Delay in Toll- Notification

8.1 According to Audit, there was a loss of toll revenue of Rs.42.23 crore in respect of four stretches due to delay in issue of Gazette Notification (Rs.4.62 crore), late handing over of site (Rs.4.05 crore), non-finalisation of site for the toll plaza (Rs.30.75 crore) and law and order problem (Rs.2.81 crore).

8.2 When asked why there were abnormal delays in getting toll- Notifications by NHAI or issue of Gazette Notification by the Ministry, NHAI replied that: -

> "It may be appreciated that tolling is an entirely new concept in India and to operationalize and streamline the same, initially it needed some time. Initially, at the time of introduction of toll, there were some procedural delays in the issuance of the Gazette notifications. Toll notifications are based on the input provided by NHAI, which have since been standardized except certain specific project details/clarifications which vary from project to project. Presently, the system has been streamlined and NHAI has been ensuring that the required notifications for levy of toll are published well in advance and fee collection is started as per the schedule without any loss of revenue, unless there are justified/unavoidable reasons."

8.3 It was also asked what steps were being taken by NHAI to get timely toll Notification and arrangements made to collect the toll with no loss of time. In reply, NHAI submitted: -

> "Advance action is being taken in NHAI based on the anticipated completion date and it is followed up vigorously with the respective Project Directors of NHAI to submit proposal for issuance of fee notification at least 150 days in advance before completion of the project. Even after the submission of the draft notification, it is followed up both in the DoRT&H, Ministry of Law and Ministry of Law (OL) wing. A Nodal Officer has also been appointed in NHAI (in the rank of GM) to make necessary follow up regarding the fee notifications with the DoRT&H and the Ministry of Law."

8.4 Regarding procedural safeguards since been evolved by NHAI for non-recurrence of lapses in future, they submitted as under: -

> "As regards procedural safeguards, various guidelines have been issued to streamline various processes, which include guidance to the PIUs for submission of fee notification within a strict time schedule and in the prescribed format. The locations of the toll plaza and the tollable length have also been finalized for GQ. For NSEW, the same is under finalization. For construction of toll plaza, various guidelines have been issued so that the same is completed along with the completion of the tollable stretch. Thus a robust system has been introduced with respect to collection of toll so that the toll collection starts without loss of time and revenue."

B. Leakages in Collection of Toll Revenue

8.5 On the problem of leakages in collection of toll revenue and measures taken to check it, NHAI further replied in their post-evidence note that: -

> "The leakage in departmental fee collection has always been a matter of concern for NHAI. NHAI has made continuous serious efforts in this area by taking various steps. Considering problem of leakage of revenue in departmental collection system, fee collection was switched over through Private Contractor. However, the experience in this system has not been encouraging as large number of complaints started coming from road users regarding overcharging/harassment. Accordingly, matter has been reviewed in Ministry and it was decided on 04.05.2006 to revert back to departmental collection primarily through DGR agencies as an interim measure. Ministry also issued guidelines for implementation of Operate, Maintain and Transfer (OMT) contracts. In OMT, private entrepreneur is selected on the basis of competitive bidding, who would be responsible for maintenance, operation and toll collection against payment of a fixed sum to NHAI periodically or upfront against retention of toll. The Model Concession Agreement for OMT is under consideration of Inter Ministerial Group (IMG). Till implementation of OMT, departmental collection through ex-servicemen is to be continued as directed by Ministry."
>
> <u>Measures Taken To Check Leakages</u>
>
> To prevent leakages, NHAI has adopted a 3 tier system in which various control measures are undertaken at field, HQ and Vigilance levels detailed as under:
>
> i) Checks organized/undertaken at Field Level

a). NHAI, vide Circular no. NHAI/Commercial Operation/47 dated 19.10.2004, for the purpose of conducting frequent surprise checks, has authorised Project Directors at field level to conduct following checks by hiring outside agency in order to improve administration of user fee collection:

1. Discreet counting and recording of vehicle at some distance from plaza and comparing with actual vehicles recorded by collecting agency.
2. Sending decoy customer.
3. On the spot observation of fee collection for 72 hours continuously.

b). Further, as per circular no. NHAI/Commercial Operation/54 dated 09.02.2005; Project Directors have been authorized to engage local fee auditors through competitive bidding. Scope of work of local fee auditors includes complete checking of all financial transactions, review of existing collection system, on the spot observation of collection of user fee, conducting at least four surprise verifications in a month mainly targeting towards cash verification, detecting use of forged tickets, noting down registration on number of vehicle crossing the plaza from some distance and company with actual record.

c). Engagement of round the clock supervision for supervising toll collection activities at the toll plaza is another mechanism adopted for improving revenue administration. It is normally a part of supervision consultancy contracts. In case, supervision consultant is not engaged on a particular stretch, Project Director is authorized to engage round the clock supervisors through Charted Accountant firm/security agency. It is critical control mechanism in departmental collection as it involves a continuous control over the activities of the booth operators.

ii) Checks organized/undertaken at HQ Level:

Following checks are conducted from HQ level:

a) 72 hours plus spot study of fee collection: Earlier, such checks were undertaken either for 72 hours or for 7 days through PricewaterhouseCoopers. Now, a panel consisting of three firms finalized after competitive bidding has been formed who undertake these studies in two phases. In Phase I, 100 % collection is observed (with or without video or mechanical recording, as instructed) with analysis, comparison with past trends and conclusion and in Phase II, depending upon findings of Phase I, matter is referred to legal advice for finding out the

further course of action like recoveries etc within the contractual framework.

b) Study of discreet observations**:** Three firms after competitive bidding have been engaged to undertake this study. In this, the representatives of the agencies try to cross the plaza for a number of times by offering less amount than notified user fee and record their findings. In addition, they also try to record the number of vehicles passing through the plaza during a brief time frame. This study gives an idea of prevalence of malpractices at the plaza. Based on which, check of continuous observation as detailed under Para (a) above, is conducted to find out the extent of leakage. After detailed analyses of reports, short collection is calculated and recovered from the fee collecting agencies.

c) From time to time, officers of Commercial Operation (CO) wing also visit plazas for acquaintance and gathering first hand information about working of various plazas and carrying out some preliminary checks.

iii) Control Measures by Vigilance Division:

The Vigilance Wing has taken a proactive role in monitoring of the Toll Plazas and taken a number of steps enumerated as under:

a) A separate post of Manager and Assistant Manager has been created to handle the toll matters. This new activity has taken shape in the month of June 2006.

b) As a preliminary six Toll Plazas have been inspected by the Vigilance Wing in the month of June 2006 and July 2006. The inspections have focused on discreet observation of traffic crossing the Toll Plazas and actual working of staff.

c) In order to have more focused inspections and scrutiny, based on the preliminary inspections proformas have been devised for calling statistics and data from the Toll Plazas. The data so collected would be analyzed further to see the trend of Toll fee collection and to recommend corrective steps where necessary.

d) A database of Toll Plazas is being created to have a complete profile of the Toll Plazas and its performance in toll fee collection so that they are monitored in terms of their performance.

e) The Vigilance Wing is actively involved in the process and monitors the progress through periodic meetings with the technical division and the IT Division at Headquarters.

Further, to minimize leakages, there is continuous emphasis for full computerization of the Toll Plazas to improve their performance and to offer better service to the users. The NHAI has computerized 42 Toll Plazas out of 53 publicly funded Toll Plazas. Here the Tickets are generated on computer at the Toll Booths and the transactions are recorded in servers. As on date only at 11 locations, the work is being done manually and these are in the process of computerization. These are scheduled to be computerized by Oct'2006 end. In order to achieve better benchmarks, many new initiatives have been taken. All the Toll Plazas are being connected through LAN/WAN with a central database at Headquarter. This will give access to user fee information to Headquarters on real time basis. A new Toll fee collection software (TFCS) developed by M/s CMC Ltd. is gradually being introduced in all the Toll Plazas to make the system more transparent and secure. These Toll Plazas will also have CCTV systems installed to have better monitoring of the Toll Booths at ground level."

C. Foreclosure of Contract with Toll-collecting Agency

8.6 According to Audit, NHAI did not take timely action in foreclosure of the contract with a toll-collecting agency that defaulted in its payments as per the terms of agreement. This resulted in non-recovery of Rs.31.26 crore. When asked to explain, the representatives of the Ministry during evidence replied: -

"In this case, the contractor himself went to the court. I think this case is perhaps related to Ganapathy Toll which is operating in Kotputli Jaipur Section. He went to the court where he lost in our favour. He went to the double bench where the judgement was against NHAI. Then NHAI went to the Supreme Court. Because of this litigation and as per the advice given by the Additional Solicitor General at that time, we were not in a position to foreclose the contract because in any case the contract was for two years time. Since the detailed hearing had taken place in the honourable Supreme Court, that was the reason why we were not in a position to foreclose the contract. The moment the contract period was over, the collection operation were taken over according to the contract provisions. As per the directions of the Supreme Court arbitration proceedings are on and based on that, recovery would be made."

8.7 When the Committee asked the representatives of the Ministry whether any responsibility was fixed by them in this regard and that had the NHAI and Ministry appropriately and properly monitored, this would not have happened, the Secretary, Ministry of Shipping, Road Transport and Highways replied: -

> "No. We have not fixed any responsibility so far though the Ministry does monitor the progress of NHAI. I could not say that each and every occurrence of this kind results in litigation is dealt with immediately. At some stage, it comes to the notice of the Ministry when it goes to the court but the Ministry is not in a position to take preventive action. As far as this matter is concerned, we will go into it and if we feel that there is negligence or anyone is responsible, we will take suitable steps."

IX. RESTRUCTURING OF NHAI

9.1 Prior to the launching of NHDP, NHAI undertook small-scale projects. Only when the NHDP was launched, the scope of NHAI was expanded to a much larger level. In this connection, NHAI stated that: -

> "In 1995, when the Authority (NHAI) was set up, its mandate was limited to implementation of a few ADB assisted works. Between 1995-1998, a few more projects were entrusted to NHAI by MoRT&H. It was, however, in 1998 that the mandate was enlarged exponentially. In order to cope with the expanded mandate, the following steps were taken-
>
> - It was decided to continue with the same implementation model as was being followed for the ADB funded projects entrusted to NHAI as well as the 2nd World Bank project implemented by the Ministry through State PWDs. The model is based on the outsourcing of various activities (design, construction, supervision, etc.) rather than undertaking all activities through its own staff. This would result in a lean structure of the organization and leverage market resources for DPR preparation, construction and day to day supervision lead to faster decision making critical for timely implementing the ambitious project of NHDP. This system of implementation was discussed in detail in the meeting taken by Secretary, Planning Commission on 14.09.99 as the Department of Economic Affairs; Ministry of Finance had in its comments on the cabinet note for the NHDP highlighted the need for deciding the manner of implementation of this gigantic project. Supervision by State PWDs was ruled out. It was felt that a new kind of construction culture was being adopted by NHAI and this should be given a try. The minutes of the above discussion were appended with the cabinet note that was approved by the Cabinet on 5th April 2000.
> - The Board of NHAI was restructured with the approval of the Cabinet in April 2000 with a view to ensuring participation at Secretary level from the Department of Expenditure, Planning Commission and Ministry of Road Transport & Highways. The Authority was delegated substantial powers to enable expeditious approval of the projects without compromising due diligence. This was also aimed at empowering the Authority sufficiently to substitute EFC/PIB for various approvals regarding NHDP.

- It was not feasible for NHAI to create a cadre of it's own in such a short time and therefore, experienced and skilled officers were recruited from the Ministry of Road Transport and Highways, various PWDs and other related organizations on deputation basis. Special exemption was also sought from the DoPT for the rule of immediate absorption for such officers. The authority created posts and made appointments thereon from time to time keeping in view the requirements for undertaking the works of NHDP.

- In order to assess the requirement of personnel, the norms for various positions (such as GMs, DGMs, Managers, etc.) were fixed and approval was obtained in the 27th meeting of the NHAI Board on 25th January 2000. Based on the norms, the manpower strength was augmented from time to time.

- Norms were fixed for creation of the Project Implementation Units (PIUs) for an effective implementation of the projects.

- For further strengthening of NHAI and to equip to meet the challenges ahead, the Authority appointed (May 2002) Price Waterhouse Coopers-Inter Continental Technocrats Ltd. (PWC-ICT) (Joint Venture) as consultant to advise on institutional strengthening. M/s PWC-ICT prepared a number of detailed reports containing specific recommendations on organization development, human resource management, strengthening of processes and systems, information technology, etc. These have been debated internally within NHAI and a number of actions have already been initiated.

- A Steering Group (SG) under Shri S.C. Sharma, Ex-DG (RD) & AS was subsequently constituted in 2001 by the Ministry of Road Transport and Highways to work on the standardization of procedures, documents and manuals for implementation of NHDP**.** A Committee was also set up by NHAI under a Member (Tech.) including outside experts for standardization of documents. Most of the documents for procurement of contractors and consultants have been standardized on the basis of Committee's recommendations.

- NHAI had also set up an internal committee to study the lessons learnt in the light of the experience of the implementation of the first phase of NHDP in order to refine the process of procurement for civil works and supervision consultants.

As explained above, NHAI was in a mission mode to complete the task assigned to it and adequate steps were taken to enhance the capacity, as and when required. Now, with the increased mandate and challenges of handling projects on Public-Private Partnership (PPP),

NHAI is gearing up by re-structuring by making it a multi-disciplinary body with high quality financial management and contract management expertise. Proposal for re-structuring of NHAI has already been finalized by the Inter-Ministerial Committee constituted for this purpose. In the proposal there is a focus on creating specialized cells for Planning and Quality assurance, Research and Development, Standardization and Project Appraisal."

9.2 In this regard, the Ministry submitted that: -

> "…In the year 2000…NHAI Board was restructured with Chairman, NHAI of the rank of Secretary to Govt. of India, five full time members of NHAI of the rank of Joint Secretary (now upgraded to Additional Secretary) to Government of India, four part time members including Secretary, Ministry of Finance (Deptt. of Expenditure), Secretary, Ministry of Surface Transport (Deptt. Road Transport & Highways), Secretary Planning Commission and Director General (Road Development) and Additional Secretary."

9.3 On being asked whether they would need a fresh amendment to the existing Act in order to provide the requisite impetus and support to complete the NHDP, the Chairman, NHAI during evidence replied: -

> "As far as the problem of fresh legal framework is concerned, we are operating under the National Highways Authority of India Act of 1988. As far as the proposal for going in a larger way with the private participants in road projects is concerned, I would submit that there is a necessity for reorienting the total organisation towards undertaking the PPP type of projects. For this, the expertise which is lacking in the NHAI has to be developed. I mean the expertise for project appraisal of PPP Projects, expertise on contract management which still becomes very critical when you are giving the project to the concessionnaire over a period of 25-30 years. So, contract management becomes a very key element as also the type of contracting we do under the PPP Projects. The expertise has to be developed. So, in the process of institutional strengthening, it has been thought of how to strengthen the NHAI to undertake such massive projects right up to Phase-VII as has been shown in the slide. For that purpose, we are thinking of setting up the Project Appraisal Cell, the Contract Management Cell, Standardisation and R&D Cell. Standardisation is also an important area. It has been pointed out in the Audit Report. So, we will do our best regarding that. Then, a lot of legal and arbitration cases are likely to come up. So, there should be a separate Legal and Arbitration Cell which will take care of that.

Then, there is the issue of road safety because there are a lot of accidents likely to happen. So, there should be a Road Safety Cell. Like that, we should have an Internal Audit Cell. We have started the process of internal audit in a big way. We have sent audit teams to all our PIUs to audit the expenditure incurred at the PIU level. So, we want to strengthen this. This is one of the things.

The other thing at the corporate level is this. Following the principle of corporate governance, we have to set up Audit Committee. It should be under an independent member. So, the Audit Committee should be set up. That will require that the Board of NHAI should be expanded suitably which also finds a reflection in the report on institutional strengthening."

9.4 In their post evidence note, NHAI stated that: -

"Keeping in view the enhanced mandate and change in focus from the EPC contracts to PPP projects, NHAI is in the process of strengthening the institution. A proposal of restructuring of NHAI has been prepared by Inter-Ministerial Committee, which has subsequently been discussed in the meeting of Committee of Secretaries. Some of the recommendations in the report would require amendment in the NHAI Act, 1988 (68 of 1988) and amendment to the NHAI (the Term of Office and Other Conditions of Service of Member) Rules, 2003."

The amendments as suggested by NHAI are enclosed in **Annexure-IV.** The main points of the Report on restructuring of NHAI as given by the Ministry in their written reply are enclosed in **Annexure-V**.

X. PROJECT MONITORING AND INFORMATION SYSTEM

10.1 On being asked whether the NHAI has maintained any Project Monitoring and Information System in order to keep track of important details like number of projects delayed beyond schedule and the period of delay, number of revisions made in the target date for completion of a project, comparative data of physical and financial achievements to facilitate initiation of decisions and corrective action at appropriate time and avoiding delays in raising of claims with funding agencies; NHAI stated in their written reply that:-

> "Several initiatives have been taken in NHAI for introduction and implementation of different IT applications. These include, Computerized Project Information System (CPIS), Project Financial Management System (PFMS), Road Information System (RIS), Toll Fee Collection Software, etc.
>
> At present, Project Management System is being used to keep a track of the details of implementation of each project by NHAI which includes, (i) details of the stretch, (ii) name of the construction agency and supervision consultants, (iii) estimated cost of project, (iv) awarded cost of project, (v) target and actual physical progress of the projects, (vi) actual expenditure, (vii) original completion period and date, (viii) revised completion date, (ix) broad reasons for delay in implementation of the project, etc. The information is used for decision making and taking appropriate corrective measures regarding implementation of projects including coordination with State Governments, providing appropriate support to the contractors and consultants, etc.
>
> Further, Project Finance and Management System (PFMS), a multi-user integrated computerized system, is also being implemented which enables financial accounting, recording of expenditure, analysis of budget v/s actuals, generation of project monitoring reports (PMR) and financial monitoring reports (FMR), etc.
>
> However, a Computerized Project Information System (CPIS) has been got developed by NHAI. The system is under testing. The features of CPIS are as under-
>
> (i) Online (intranet) and real-time project monitoring system for use through wide area network (WAN) at the Head Office and the Project Implementation Units (PIUs) of NHAI, Ministry of Shipping, Road Transport & Highways.

(ii) Enables collection of details of physical and financial progress in respect of each project which includes details of pre-construction activities (like DPR consultancy, land acquisition, tree cutting, shifting of utilities, procurement of civil works contractors and supervision consultants, etc.) and construction activities (like contract details, completion schedule, cost of the project and expenditure incurred so far, variations, extension of time, etc.).

(iii) Enables tracking of each project with a view to analyze the reasons for delay in implementation of projects and take corrective/appropriate measures.

However, the scope of NHDP is being expanded to include various other phases like Phase-III (10,000 km on BOT), Phase-IV (2-lane and paved shoulders of 20,000 km), Phase-V (6-laning of 6,500 km), Phase-VI (1000 km Expressways) and Phase-VII (Ring Roads, Flyovers, etc.). Accordingly, to track the implementation of these projects, various information would need to be stored including the details regarding land acquisition, procurement of services, financial close, etc., which would force the volume of data growing very fast and therefore, the information system would need to be upgraded. Therefore, NHAI is considering implementation of ERP (Enterprise Resource Planning)."

XI. ACCOUNTING PRACTICES

11.1 Regarding accounting practices, Audit in Chapter-11 has submitted that NHAI as a corporate body was required to maintain its accounts on commercial principles. But in respect of the following cases, the accounting policies followed by it were not in consonance with the Generally Accepted Accounting Principles, pending decisions by the Administrative Ministry.

1. NHAI was only an implementing agency to carry out NHDP by the Government. As on 31 March 2004, there were 39 completed stretches for a total length of 880.21 km valuing Rs. 3079.65 crore. These works were continued to be exhibited as Capital Works in Progress (CWIP) in the accounts.
2. The Administrative Ministry had so far not given any direction to NHAI about the ownership of the assets acquired during the construction such as PIU Buildings, guesthouses, computers, cell phones etc.
3. NHAI had earned interest by depositing the unutilized money received for the project and this interest was credited to the capital account. This interest income was not an income of NHAI. Treatment of interest income as capital instead of reducing it from the CWIP is not an accepted accounting principle. The consultants appointed by NHAI had given their report and the same is under consideration by the NHAI Management.

11.2 In reply to this, NHAI submitted: -

> "In accordance with section 4 of the National Highways Act, 1956, the national highways vest with the Government of India (GoI). Various sections of national highways have only been entrusted to the National Highways Authority of India (NHAI) with the primary responsibility of development, maintenance and management of such sections of the national highways entrusted to NHAI. While NHAI is only an implementing agency of the Government of India (GoI) to implement the highway projects on behalf of and out of the funds provided by GoI, the assets vest with GoI. Moreover, the assets created in future will also vest with GoI. Since the ownership of the assets has not been transferred to NHAI, the expenditure incurred on

the implementation of the projects has not been capitalized in the books of accounts of NHAI.

However, the matter regarding the capitalization of the expenditure, charging of depreciation and treatment of toll revenue as the income of NHAI in the books of NHAI is under the consideration of the Department of Road Transport & Highways, Ministry of Shipping, Road Transport & Highways (MoSRT&H). As and when a decision is taken regarding transfer of ownership of the assets to NHAI, necessary compliance will be made as per the decision and directions of MoSRT&H.

Pending above, the expenditure on the completed sections of the national highways has been reflected separately as 'Expenditure on completed projects awaiting capitalization/transfer' in the accounts for the year 2005-06."

PART - B

RECOMMENDATIONS /OBSERVATIONS OF THE COMMITTEE

Recommendation No. 1

Delay in Completion of NHDP, Phase-I

The Committee note that 'in principle approval' for NHDP, Phase-I was given by the Government in December 2000, covering a road length of 6,359 kms. NHAI was mandated to carry out this task with the target date for completion as June 2004. However, as on this target date, the NHAI could complete only 29% of the total work. Thus, the achievement was far less than the targets fixed. The target date was subsequently revised to December 2005, overshooting the original schedule by 18 months. However, even the extended completion date of December 2005 could not be achieved by NHAI. As per the latest position made available to the Committee, 92.6% of the Golden Quadrilateral has been completed and the few balance portions of the work are likely to be stretched even to December 2008.

In this regard, the Committee note with concern that work on a few of the stretches out of the total of 175 stretches into which the entire project was divided, could start only after June 2004, which was the initial target date set out for completion of the entire project. Further, according to Audit observation, NHAI was required to award contracts for the entire Phase-I by March 2002. However, against this target, NHAI could award contracts only for a length of 4,863 km (76%) up to March 2002 and 5,628 km (88.5%) up to March 2004 whereas contracts for 380 km were not even awarded by June 2004, which was the originally scheduled date for completion of the entire Phase-I of NHDP. According to Audit, NHAI delayed the award of contracts after receipt of bids by 2 to 17 months beyond the bid validity periods.

Analyzing the reasons for delay in completion of NHDP Phase-I, the Committee note that the delays occurred broadly on account of pre-construction activities. These include acquisition of land due to procedural formalities, litigation and court cases; getting forest clearance; obtaining clearance/approvals from Railways for construction of Rail Over Bridges; shifting of utilities like electric lines, water pipe-lines, sewer lines etc; Factors like poor performance of the contractors, frequent stoppage of work by local population demanding additional underpasses/bypasses, flyovers, etc. also contributed to the delay. The Committee also take into account the observation of the Audit that at the time of sanction of NHDP Phase-I, 90% of the land was already acquired. However, factors like inability of contractors to synchronise resources, ineffective contract management by NHAI and Project Supervision Consultants, faulty and incorrect contract clauses, incorrect and incomplete data in the Detailed Project Reports also contributed to the delay.

The Committee note that the NHAI has justified the delay on the ground that a programme of this magnitude was unprecedented and the quantum of pre-construction activities involved in the project were unmatched to any project implemented in the past. Further, most of the pre-construction activities depended upon the cooperation of the State Governments, which was not forthcoming, and most State Governments were ill-equipped with the resources required for such huge pre-construction activities. Thus, the progress of the NHDP was dependent on the cooperation by the State Governments, which was beyond the control of NHAI. However, where the delays were attributable to the contractors, NHAI had taken action against them by levying liquidated damages and terminating their contracts.

The Committee, therefore, are of the view that the main factor, which has contributed to the delay in implementation of Phase-I of the NHDP, is the slow process of land acquisition primarily caused due to the inaction on the part of the State Governments. From the status report as on 31 July,

2006 furnished by NHAI, 9.15% in Tamil Nadu, 4.83% in Maharashtra, 4.62% in West Bengal, 2% in Jharkhand, 1.57% in Karnataka, etc. (totalling 2.21% of the entire land to be acquired under NHDP Phase-I) of balance land is yet to be acquired from these State Governments. In this regard, the Committee note that the Ministry have now taken a number of measures for expeditious completion of Phase-I of the NHDP and its subsequent phases. These measures include authorizing the Department of Road Transport to issue land acquisition Notifications without reference to Ministry of Law by amending the Allocation of Business Rules; constitution of a Committee of Secretaries (COS) headed by Cabinet Secretary to resolve Centre-State issues and Inter-Ministerial coordination; appointment of Nodal officers to coordinate various matters for solving problems like land acquisition, shifting of utilities, forest and environmental clearance, posting of a Director level officer of Railways on deputation basis to NHAI for expediting approval of Rail Over Bridges, and reviewing the status of pre-construction activities in NHAI Headquarters on a fortnightly basis.

The Committee are of the view that roads are important infrastructure to facilitate economic development of the nation. The NHDP has been undertaken as a massive upgradation programme of high traffic density corridors of National Highways in the country. Therefore, the timely implementation of NHDP Phase-I is of utmost importance for smooth transportation of goods as well as offering safe and better riding quality to road users of the National Highways. Unfortunately, the delay factor has adversely affected toll revenue, traffic synchronization, and benefit to the road users as projected at the time of project approval. Though the Government/NHAI have sought to justify the delay, the fact remains that there were avoidable lapses on the part of the NHAI as well as the Government, which resulted in enormous delay in timely completion of NHDP Phase-I. In this direction, the Committee note with concern that the much-hyped Committee of Secretaries (COS) constituted to resolve Centre-State issues and Inter-Ministerial coordination held its first sitting only on 1

April, 2005 i.e. after five years of the launch of NHDP Phase-I. As per the information furnished to the Committee, as on 31.7.2006, the said Committee has held only one further sitting on 3.11.2005. This is a serious reflection on the monitoring role of the Government for ensuring timely implementation of NHDP and removal of impediments. For instance, in the case of Tamil Nadu, 9.15% of the land as on 31 July 2006 was yet to be acquired. The same is the case with few other States also.

In the context of the above background, the Committee recommend that the following urgent steps be taken to ensure that the delay occurred in NHDP Phase-I is not repeated in subsequent phases of NHDP: -

(i) NHAI should prepare monthly progress reports for each project/sub-project indicating clearly, the target date of completion, delay if any, reasons for delay, status of land acquisition, rehabilitation & resettlement, shifting of utilities, obtaining of environmental clearances, progress of litigation if any, the officers/agencies responsible for these activities, names of the state nodal officers and the officers/agencies associated with the sub-project.

(ii) The above mentioned monthly progress reports should be considered by the NHAI Board where the areas of concern shall be identified along with the remedial measures to be taken. Thereafter, the said reports along with the action taken notes should be forwarded to the Ministry and the main highlights be brought to the notice of the Committee of Secretaries (COS).

(iii) The Committee of Secretaries (COS) headed by the Cabinet Secretary should hold review meetings more frequently, say at least every quarter, so as to serve any useful purpose and address the issues requiring immediate Government attention.

(iv) **The nodal officers appointed by the concerned State Governments for coordinating and resolving the various problems relating to the land acquisition progress and other matters**

(v) **should furnish progress reports on monthly basis for review by the Chief Secretaries of the concerned States.**

(vi) **The existing procedures relating to land acquisition, shifting of utilities, obtaining forest clearances, etc. should be reviewed and updated on a continuous basis in the light of experience gained during implementation of various phases of the NHDP.**

(vii) **A time limit for processing of bids for award of contracts must be fixed and should be strictly adhered to in order to avoid any delay in the award of contracts.**

(viii) **The performance of contractors must be monitored on day-to-day basis and stiffer penalty be imposed if the contractors underperform and cause delay.**

(ix) **The monitoring role of Project Implementation Units of NHAI should be strengthened and additional responsibilities be entrusted to them to cut short any sort of avoidable delays on account of any shortcomings on the part of Design Consultants, Project Supervision Consultants and the contractors etc.**

(x) **For expeditious acquisition of land, the National Highways Act, 1956 may be suitably amended prescribing *inter-alia* a time-limit for initiating the arbitration proceedings; acquisition through mutual consent to a limited extent; possibility of invoking an urgency clause as is available in the Land Acquisition Act for faster land acquisition process in some special cases, etc.**

Recommendation No. 2

Performance of Detailed Project Report (DPR) Consultants

The Committee note that the execution of any project initially starts with the preparation of the Detailed Project Report. The Detailed Project Report primarily consists of designs, quantities of works and cost estimates etc. involved in the execution of a project. With this sole purpose, the DPR Consultants are appointed by NHAI for preparing various Detailed Project Reports. The Audit has pointed out that the NHAI did not address the risks associated with the terms of contracts and performance of DPR Consultants with adequate attention, which ultimately became the prime reason for time and cost overrun in execution of Phase-I of NHDP. The Audit has further pointed out that DPRs were deficient in terms of precise items of works; land to be acquired; sub-soil investigations, bridge design; correct technical specifications; shifting of utilities and designs of various key items of works etc.

The NHAI has tried to justify the deficiencies in DPRs on the grounds that – quantities in highways projects cannot be estimated with full accuracy; the site conditions dictate some changes from the original quantities; additional facilities are created due to public pressure and additional features are included for safety considerations which might not have been envisaged at the DPR stage etc. The NHAI has, however, admitted that there have been instances where DPRs have been found wanting and the action has been taken against the defaulting DPR consultants. The Committee fully agree with the recommendations made by the Audit in their Report that – NHAI needs to frame and issue guidelines/ policy directives to the DPR consultants to ensure uniform design practices, to initiate action against the DPR consultants in case of deficiencies due to negligence and to install a system where DPRs are reviewed before commencement of tendering process to avoid large variations etc.

In this direction, the Committee note with satisfaction that NHAI has since strengthened the system by revamping the system of DPR preparation, providing for peer review of DPRs and associating the Field Officers of NHAI in preparation of DPRs. The performance of DPR consultants is now watched carefully and apart from performance security, provisions have also been made for penalty/debarment in case of delay in preparation of DPRs; variation in DPRs and actual quantity; proof checking of major structures etc. Further, DPR consultants are now required to furnish an Indemnity Bond to take care of any shortcomings. The Committee while approving the above-mentioned remedial measures recommend that the same should be reviewed periodically during the implementation of subsequent phases of NHDP.

Recommendation No. 3

Performance of Project Supervision Consultants (PSCs)

Project Supervision Consultants (PSCs) are responsible for the overall supervision of the works related with project implementation. The PSCs are appointed by NHAI through a competitive selection procedure. The PSCs administer the contracts. Day to day activities like monitoring the progress and quality, measurement of works, certification of payment etc. are performed by them. In addition, the PSCs recommend extension of time and variations to the contracts etc.

The Committee note that the Audit in their report has pointed out that NHAI did not address the risk associated with the terms of contract and performance of PSCs with adequate attention which resulted in time and cost-overrun. The NHAI failed to determine comprehensively the terms of reference of the PSCs, which did not provide for performance warranty and penalties for underperformance. The performance of PSCs was also found wanting in overall supervision of the projects, in following quality assurance procedures, verification of works and bills, variations in the works, determination of rates of payment for varied quantities, approval of the sub-contractors, recommendations on Extension of Time (EOT) and compliance to the terms of contract by the civil contractors.

In this context, the Committee note that NHAI has admitted to the existence of certain shortcomings in the contract documents entered into with the PSCs inasmuch as the requirements of seeking client's approval were not very clearly spelt out. As such, various consultants took varying stands on the interpretation of clauses relating to variations and extensions of time and interpretation of the ground conditions leading to inefficient contract management and non-compliance of the contract provisions. In many cases, the items were approved by the Consultants without obtaining prior technical approval from NHAI. As regards the action initiated by the NHAI against the erring PSCs, the Committee observe that

based on the severity of non-compliance, punitive measures have been undertaken by NHAI including debarment of the consultants for participating in future contracts and for recovering damages for negligence and misconduct.

The Committee note that as per the reply of NHAI, the above shortcomings have now been properly addressed and the standard contract documents for civil contracts as well as consultancy contracts now contain explicit provisions in this regard. Now, in case of breach of contract provisions by PSCs, various remedies like encashment of bank guarantees and recourse to Professional Liability Insurance will be resorted to. Further, NHAI has recently formulated a policy according to which the performance of the consultants is reviewed and in cases where the performance is found lacking, the erring consultants would be warned and even debarred for a period of one year or more depending upon the severity of the non-compliance.

The Committee observe that NHAI has miserably failed in lot of areas concerning Project Supervision. The Committee recommend that overall mechanism of Supervision of projects/works should be strengthened and be given a radical reorientation to make it more effective.

Recommendation No. 4

Quality of Work Executed

The Committee note that as per the Audit observations, NHAI did not ensure compliance to the quality assurance procedures by the Project Supervision Consultants. The lapses on the part of PSCs include – failure to obtain quality assurance plans from contractors; not carrying out quality control checks; incomplete documentation on quality control etc. The independent quality checks in seven stretches carried out by the Central Road Research Institute engaged by Audit revealed many works not conforming to the specifications. As per the information furnished by NHAI to the Committee, M/s Engineers India Limited were awarded the contract for conducting Quality Audits. The defects/ deficiencies/ non-conformities observed by the said audit team were rectified by the concerned contractors and the PSCs.

The Committee feel that adherence to quality assurance procedures is vital for the success of the entire NHDP. The fact that some tests on the material used for road construction failed indicates the unsuitability of the material used and deficient quality of road construction. Such projects of international repute must match the well laid down global standards in terms of quality. The situation becomes grimmer in the light of the fact that NHAI did not react to the quality audit reports endorsed to them by the Audit. To quote a glaring instance, in the case of Gorhar-Barwa Adda stretch, Audit observed that the geo-textile material valued at Rs. 5.79 crore used between sub-grade and granular sub-base was not even approved material. The Committee feel perturbed at the response of the Ministry/NHAI who had stated that the said quality check work was entrusted to IIT Delhi but due to non-availability of the testing facilities in the Institute, NHAI failed to ascertain the suitability of the material used. This issue raises a very serious doubt over the overall ability of the NHAI to ensure quality assurance of the executed work. The NHAI have tried to

defend themselves by submitting that guidelines have been issued to all Project Implementation Units of NHAI covering the general deficiencies observed by Audit, for taking corrective action. Even M/s Engineers India Limited (EIL) engaged by NHAI have pointed out several deficiencies in the quality assurance procedures such as – (i) Quality Assurance Plans prepared by contractors were being submitted in piecemeal (ii) Plans prepared by PSCs were differing from the plans prepared by the contractors (iii) the test results of materials tested in outside laboratories were being received by the contractors and not by the consultants; (iv) routine tests were not witnessed by the Supervision Consultants (v) road tests were not carried out and the work was allowed to go ahead (vi) in the case of Built Operate Transfer (BOT) projects, the concessionaire did not give due regard to the instructions issued by the independent consultants; in some cases the jobs were sub-let even without the approval, etc. This speaks volumes about the overall quality of execution of work on various undergoing phases of NHDP. The only positive thing done by NHAI on the said observations of EIL is that they circulated these observations to all their Project Implementation Units with the request to bring them to the attention of the contractors and Supervision Consultants for discussion and taking preventive and remedial measures for assuring the desired quality *vide* NHAI communication dated 12 July, 2003.

In the light of the above backdrop, the Committee agree with the recommendations of the Steering Group (SG) constituted by the Ministry in the year 2001 which *inter-alia* provide for; (i) requirement of external quality audit system for highway projects; (ii) preparation of a panel of pre-qualified quality auditors; (iii) instead of engaging a single institution for carrying quality audit, the system should be more broad based involving a number of institutions/individuals; (iv) the quality audit should be done at intervals of 6 months and by rotating the auditing agencies; and (v) the quality audit should also keep in view the conditions of the consultancy contract of the Project Supervision Consultants. The Committee

recommend that NHAI should follow these recommendations in letter and spirit and should not compromise on any aspect of quality of the executed works. The Committee further note that there is a proposal for creation of a Quality Assurance Cell in NHAI with key responsibilities for promotion of quality assurance initiatives, quality checks through inspection of the ongoing works including quality audit through external professional agencies. In this regard, the Committee recommend that the said proposal needs to be expedited and implemented at the earliest. The Committee are of the view that if good quality of road construction is ensured at the initial stage itself, then it would definitely minimize the subsequent maintenance costs.

Recommendation No. 5

Standardization of Stretches

The Audit in their report has pointed out that NHAI did not standardize the length of stretches for award of contracts to facilitate cost comparison for award and execution of work nor did it devise any more robust and effective cost control mechanism as an alternative. This resulted in variation in cost per km of contiguous stretches from 1.86 crore to Rs. 4.20 crore per km. In this regard, the Committee note that both the Ministry as well as NHAI have expressed reservations on the possibility of standardization of stretches. It has been submitted that the same is not possible because of a large number of variables like variations in number of major bridges/stretches, length of service roads, terrain and soil conditions, traffic volume, etc.

In this connection, the Committee note that according to the guidelines specified by the Public Investment Bureau (PIB) for scrutiny of individual sub-projects under NHDP by NHAI Board, it has specifically been *inter-alia* included that the proposals for the investment decisions of the sub-projects should contain the details of the costs of 4/6 laning along with the comparative cost of latest approved/awarded projects on a like to like basis. In case of substantive variations, specific justification should be given. However, no information either by the NHAI or by the Ministry has been furnished to the Committee suggesting that any attempts have been made to compare the cost on a like to like basis as indicated in the said guideline. In this regard, the Committee feel that now after a lapse of almost 6 years since launching the NHDP, enough experience and technical data is available with NHAI and the same is required to be put into use to take care of the reservations expressed by the NHAI regarding standardization of the stretches. In addition to this, the NHAI should also explore the possibility of devising alternative cost control system so that the kind of variance pointed out by the audit could be addressed.

Recommendation No. 6

Preparation of Contract Documents

The Committee note that NHAI did not prepare the contract documents with due care and there were inconsistencies in various clauses in respect of Conditions of Particular Application (CoPA), price escalation clause, recovery clause for Mobilization Advance and Standardization of Bills of Quantities (BoQ) in respect of Bituminous Course. Regarding the Bills of Quantities, the Audit has pointed out that an extra cost of Rs. 260.98 crore was incurred with reference to the lowest quantities of bituminous work in the 23 stretches for which the analysis was made. In these stretches, the quantities per km of Bituminous Course varied widely from 4% to 1280%. The Committee note that as remedial measures, the Conditions of Particular Application in respect of price variation clause and recovery clause for Mobilization Advance in the bid documents have since been standardized *vide* NHAI circular dated 27 August, 2004. The Committee note with satisfaction that the same has been verified and found correct in the follow-up audit conducted by the C&AG.

As regards standardization of Bills of Quantities, the NHAI has stated that it is not feasible to standardize the per km quantity of bituminous work as bituminous pavement thickness depends on various parameters such as traffic density, type of terrain, soil, climate conditions etc. The Committee are not satisfied with this sort of response from NHAI. Though it may be correct that the thickness of bituminous layer may depend on the above parameters, but these parameters do not undergo abrupt changes for similar type of stretches. Further, laying of bituminous course commences only after the completion of the sub-base and base courses, which ensure evenness of the surface. As informed by Audit, the maximum thickness of the Bituminous Course should be 40 mm only (up to 100 msa-million standard axles). In view of this, the Committee

recommend that NHAI must explore the possibility of standardization of Bituminous Course to the best possible extent in view of data collected so far in this regard. Further, collective views of the DPR consultants along with the in-house expertise available with NHAI may also be put into use to achieve this objective besides making its whole set of operations more transparent and accountable.

Recommendation No. 7

Overpayments made to the Contractors on account of Excise and Customs Duty Exemptions.

The Audit in their report has observed that while calling bids for stretches funded by the World Bank, NHAI failed to include a clause in the Notice Inviting Tenders (NIT) that the bidders should quote the prices excluding customs/excise duties, as exemptions were available to them. Also, the provisions for payment of price escalation incorporated in the agreements did not provide for exclusion of excise duty element from the basic price of raw material agreed to. According to Audit, the omission has resulted in NHAI not getting the benefit of duty element and resultant lower cost. Further, NHAI issued exemption certificates to five contractors, after finalizing the contract for availing the duty exemption but could not recover the proportionate duty element from the bills of contractors in the absence of necessary stipulation. This resulted in undue benefit of Rs. 30.69 crore to these five contractors.

The NHAI/Ministry have sought to justify their position by submitting that such exemptions were already in existence before the contracts were awarded to the contractors. It would, therefore, not be legal for NHAI to recover the benefit availed by contractors in view of the exemption Notifications of the Government of India since NHAI's action would restrict the benefit given by the Sovereign.

The Audit has, however, countered the above contention on the ground that the Government of India vide their Notification No. 108/95-C.E. dated 28.8.1995 issued in exercise of powers conferred by Section 5A (1) of the Central Excise and Salt Act, 1944 read with Section 3(3) of the Additional Duties of Excise (Good of Special Importance) Act, 1957, exempted from payment of excise duty all goods that are supplied to the projects financed by United Nations or International Organizations and approved by the Government of India. As such, the duty exemption is available to the projects and not to the contractors. Audit was not provided

any documentary evidence that the excise/customs duty elements were duly factored in at the time of award of contract. In the absence of any clear stipulation in this regard in the contract, what could happen is that the contractors would receive full payments inclusive of the duty element and they would receive the refund from revenue authorities and not pass on the same to NHAI. In this way the contractors would gain and NHAI would loose. Normally, the provision relating to duty exemptions should be a routine provision incorporated in the Notice Inviting Tenders and then the contractors are expected to pay back to the client (NHAI, in this case) the duty refund received by them from the revenue authorities. NHAI should have exercised due professional care in ensuring and documenting this aspect before releasing the Duty Exemption Certificate.

Taking into consideration the above-mentioned positions taken by the Ministry/NHAI vis-à-vis the C&AG's contention, the Committee feel that the whole issue needs to be looked into.

Recommendation No. 8

System of obtaining/revalidating Bank Guarantees

According to the Audit observation, the NHAI did not have a reliable system/mechanism of verifying the credentials of the bidders and keeping the Bank Guarantees valid through periodical renewals to avoid their expiry. This resulted in legal complications and contributed towards loss. On these accounts, the NHAI could not recover a total of Rs. 24.44 crore from two contractors.

In this regard, the Committee note that various Bank Guarantees like performance security, mobilization and equipment advance Bank Guarantees, retention money etc. are obtained from the contractors to safeguard the interest of the client i.e, NHAI. However the whole purpose is likely to be defeated if the Bank Guarantees so furnished by the contractor are not verified or periodically renewed to prevent their expiry. The lackadaisical manner in which the Bank Guarantees were handled is revealed from the fact that in the case of six projects, the Bank Guarantees furnished by the contractors were found to be forged. This raises a very serious question on the overall system of engaging high profile firms/ contractors by the NHAI to carry out execution of such big projects. Submitting forged bank guarantees is definitely a criminal offence and should have been dealt with equal severity. Further, had there been a robust system of timely renewal of bank guarantees in place, the recovery could have been affected without loss of time/interest and legal complications. The Committee, therefore, recommend that responsibility must be fixed on the concerned officers of NHAI who were responsible for verification and timely renewal of bank guarantees in view of the losses suffered by NHAI on these counts. Further, the NHAI must put into place a fool proof and robust system of handling the Bank Guarantees.

Recommendation No. 9

Payment of Escalation

The Audit has observed that there were ambiguities/inconsistencies in the contract clauses in respect of 15 contracts. This had led to different interpretations with regard to admissibility of price adjustment under various categories. NHAI initially withheld the price escalation claims but subsequently released payments of Rs. 77.71 crore to 15 contractors as price escalation against receipt of Bank Guarantees. Further, the said price escalation was paid with total disregard to the opinion of the Ministry of Law and Justice that no price escalation was payable as per the provisions of the agreement.

In this regard, the Committee note that the NHAI/Ministry have admitted that the contract conditions for 15 out of 28 contract packages relating to payment of escalation were worded differently leading to the inadmissible payment of escalation. As regards the releasing of such escalation amount to the contractors pending opinion of the Law Ministry, the Committee are not at all convinced with the justification of the NHAI that this step was taken in view of the representations made by the Contractors' Federation pleading that this was an unintentional discrepancy in the wording of contract conditions in these particular contracts vis-à-vis the other contracts and that the payment was made against the Bank Guarantees. The Committee feel that such a step by a professional organization like NHAI was totally against the concept of sound business principles and prudent commercial practices as it has jeopardized its own financial interests. The Committee do not find that any urgency was involved for release of payments pending decision of the Law Ministry, which have now become difficult for NHAI to recover and are being litigated in the courts. In fact, such a situation would not at all have arisen had NHAI adopted uniform and unambiguous contract provisions for all the contracts. While observing that NHAI has recovered Rs. 11.73 crore

of this escalation payment, the Committee strongly recommend that NHAI may make all possible efforts to recover the balance amount of Rs. 65.98 crore. It may also ensure standardization and uniformity in contract provisions so as to prevent recurrence of such lapses in the future.

Recommendation No. 10

Toll Collection

Toll revenue is a fee levied and collected from mechanical vehicles for services or benefits rendered in relation to the use of a section of a National Highway, bridge or tunnel. The National Highways Act, 1976 authorizes the Government to levy such fee.

The Committee note that according to the Audit observation, there was a loss of toll revenue of Rs. 42.23 crore due to various reasons such as delay in issue of Gazette Notifications; late handing over of site, non-finalization of site for the toll plaza and law and order problems etc. Further, NHAI did not take timely action in foreclosure of contract with a toll-collecting agency that defaulted in its payments as per the terms of agreement resulting in non-recovery of Rs. 31.26 crore.

The NHAI while admitting that there were some procedural delays in the issuance of Gazette Notifications has sought to justify the above audit observations on the grounds that tolling is an entirely new concept in India. As such, it initially needed some time to operationalise and streamline the same. However, the system has since been streamlined and now it is ensured that required Notifications for levy of toll are published well in advance and fee collection is started as per the schedule without any loss of revenue. For this purpose, a nodal officer of the rank of General Manager has also been appointed in NHAI for following up the toll Notifications with the Department of Road Transport and Highways and also the Ministry of Law. Further, the locations of toll plazas and tollable lengths have also been finalized for the Golden Quadrilateral and those for North-South & East-West corridors are under finalization.

As regards the delayed decision to terminate the contract with a toll collecting agency resulting in non-recovery of Rs. 31.26 crore, the Committee note from the information furnished by the Ministry that this issue pertains to Kotputli – Alwar Section of NH-8 in the State of Rajasthan

where the contract for toll collection was awarded to M/s Ganapati Tolls on the basis of competitive bidding. The period of contract was from 30.03.1998 to 14.03.2000. The said contractor started defaulting in making the contractual payments and also started overcharging from the users. On the matter being pursued by NHAI, the contractor resorted to several litigations to delay the punitive action against him. As per the latest status furnished by the Ministry, the matter of toll recovery from the toll agent is presently under arbitration.

The Committee are of the view that huge investments are involved for construction and development of the National Highways. Hence, proper collection of toll revenue is of unassumed significance. The Committee has been further informed that the actual user fee collection for the financial year 2005-06 is to the tune of Rs. 798.34 crore. With the completion of the subsequent phases of NHDP, the toll revenue is likely to attain gigantic amounts. In view of this, the Committee feel that proper planning, timely action for issuance of toll Notifications, putting up of toll plazas and engagement of agencies for toll collections are of paramount importance. However, the Committee feel that by all accounts there have been prevalent irregularities in practice causing avoidable leakages. Keeping in view the fact that the system of toll collection is prone to leakages, there is a dire need for NHAI to improve its system of monitoring of tolling agencies so as to pre-empt any attempt at leakage/non-remission of the toll collections as had happened in the above mentioned case. The Committee trust that various measures taken by the NHAI to prevent toll leakages such as conducting frequent surprise checks; engagement of round the clock supervisors; 72 hours plus spot study of fee collection; study of discreet observations; computerization of toll plazas etc. would be strictly adhered to. The Committee recommend that such measures be reviewed periodically for removal of any shortcomings and a fool proof and legally sound system needs to be evolved and put into use so as to avoid ugly situations where the NHAI becomes totally helpless either to foreclose

a contract or to take any punitive action against the contractor in case of his defaulting the terms of agreement. The Committee wonder whether the credibility of the contractor so appointed by NHAI in the extant case was at all ascertained by the NHAI before awarding the contract. The present case definitely points towards shortcomings on this account. The Committee also direct that all efforts must be made by the NHAI to recover its legitimate due by presenting its case professionally during the arbitration proceedings. In this regard, the Committee desire that the proposal of the Ministry for creation of a Legal and Arbitration Cell in NHAI headed by a Chief General Manager with experience in Concessions and Contract Law be implemented without any delay for the purpose of handling competently the issues related to monitoring of dispute resolution process and all legal and arbitration cases.

Coming to the question of the proposed implementation of a Modern Toll Collection System as a future solution, the Committee note from the information furnished by NHAI that the said system comprising of many advance sub-systems would have some distinct advantages in terms of preventing leakages besides being user convenient by allowing the toll collecting agency to improve customer service and satisfaction. In this direction, the Committee recommend that with the fast development of NHDP, all efforts must be made by the Government as well as NHAI to put into place the Modern Toll Collection System at the maximum number of toll plazas in a time bound manner so as to cover the entire NHDP. For this purpose, target dates for various toll sections must be fixed and their implementation must be ensured.

Lastly, the Committee recommend that as an exercise of foresight, the NHAI must prepare a list of all the present and future tollable stretches indicating the details of expected revenue, cost of collection, arrangement for collection etc. besides bringing out clearly the variations, if any, from the Government approved toll norms and the reasons for the same etc.

Recommendation No. 11

Restructuring of National Highways Authority of India

The Committee note that in 1995 when the NHAI was set up, its mandate was limited to implementation of a few Asian Development Bank assisted works and subsequently, a few more projects were entrusted to it by the Ministry of Road Transport & Highways. It was only after the sanctioning of the NHDP in 1998 that its mandate was enlarged exponentially. To cope with the increased mandate, the Committee feel that institutional strengthening of NHAI is very crucial. In this direction, the Committee note that the Committee on Infrastructure under the Chairmanship of Prime Minister considered this issue and decided that it is necessary to build NHAI's institutional capacity by making it a multi-disciplinary body having high quality expertise in financial and contract management. Accordingly, an Inter-Ministerial Committee constituted under the Chairmanship of Secretary, Road Transport and Highways has *inter-alia* recommended that the tenure of the NHAI Chairman be fixed for at least 3 years extendable to 5 years; increase in number of part-time members in NHAI Board from the present 4 to 6; 6 full time members against 5 at present; to empower the Authority to create posts in NHAI upto the level of Chief General Manager and creation of additional posts of CGMs, etc. This Committee has also recommended establishing expert cells in NHAI in the fields of Project Appraisal, Planning, Quality Assurance, Standardization and R&D, Contract Management, Legal Arbitration and Safety. The Committee note that the above-mentioned report is presently under the approval of the Cabinet. In view of this, the Committee while appreciating the efforts made by the Government for restructuring of NHAI feel at the same time that this should have been done much earlier. There has been a definite laxity on the part of the Government for not initiating these measures during the initial stages of NHDP. The Committee, therefore, recommend that, as promised by the

Ministry during their deposition before the Committee, all requisite efforts must be made to complete the whole exercise of restructuring of NHAI including some amendments required in the NHAI Act, 1988 for creation of certain additional posts, by the end of the year 2006. The Committee further recommend that the exercise of framing the Recruitment Rules, if any, required to be framed in pursuance of the amendments in the NHAI Act should also be started simultaneously so that requisite posts in NHAI could be filled up in time.

Recommendation No. 12

Implementation of Subsequent Phases of NHDP

The Committee note that Phase-I of the NHDP suffered many shortcomings during its implementation resulting in time and cost overrun. These shortcomings occurred primarily on account of inadequate planning and non-synchronization of pre-construction activities, lack of coordination with governmental agencies, deficient Detailed Project Reports, inadequate contract management and non-standardization of contract provisions. Further, lack of effective deterrent provisions regarding performance of DPR consultants, Project Supervision Consultants and Contractors etc. led to making of overpayments and sub-standard quality of works besides resulting in delayed completion of project.

The Committee are, however, inclined to give lenient view to NHAI with regard to the above-mentioned deficiencies keeping in view the fact that the Authority was performing such a mammoth task for the first time. The lack of experience by NHAI in handling projects and programmes of this magnitude is the main reason for the deficiencies observed in planning and contract management during implementation of Phase-I of the NHDP.

In the above backdrop, the Committee observe that the subsequent phases i.e. Phase-II and Phase-III of the NHDP Project are already under implementation by the NHAI and the approval for other phases like Phase-IV to Phase-VI has already been given by the Government. The Committee feel that NHAI should learn a lesson from its past experiences and ensure that the lapses which occurred during the implementation of Phase-I do not recur in the subsequent phases of NHDP. The Committee recommend that the NHAI must evolve a system for continuously storing and using experiences gained over the passage of time in various fields such as bid process, contract management, time and cost overrun, quality of work, performance of Contractors, Design Consultants and Supervisory Consultants etc. and this must be put into use in the subsequent phases in

the best possible manner. The Committee further recommend that the recommendation of the Inter-Ministerial Committee (IMC) constituted by the Ministry regarding establishment of Expert Cells in the field of Project Appraisal, Planning, Quality Assurance, Standardization and Research & Development, Contract Management, Arbitration and Safety be implemented without any further loss of time so as to establish in-house specialist expertise in these fields.

New Delhi
6th December, 2006
15 Agrahayana, 1928 (S)

RUPCHAND PAL
CHAIRMAN
COMMITTEE ON PUBLIC UNDERTAKINGS

GLOSSARY OF TECHNICAL TERMS

Sl. No.	Items of work	Description
(1)	(2)	(3)
1.	Alignment	The vertical and horizontal location of a road.
2.	Bitumen	A viscous liquid or solid material black or dark brown in colour, having adhesive properties, consisting essentially of hydrocarbons, derived from petroleum occurring in natural asphalt and soluble in carbon disulphide. Normal grades used - 50 pen (hard) to 100 pen (soft).
3.	Bituminous	Containing Bitumen
4.	Bituminous Concrete (BC)	Laying and compacting for use in wearing or PCC in the thickness of 25 mm to 100 mm, using prescribed aggregate and premixed with bitumen on a bituminous bound surface.
5.	Borrow Excavation	When NHAI specifies a new roadway to be constructed; the roadway embankment is usually constructed from earth available on the right-of-way, however, if there is insufficient earth the contractor is required to obtain the needed additional material from off the right-of-way *(land).* This material is called borrow excavation
6.	Borrow Pit	The source of approved material required for the construction of embankments, or other portions of earthwork requirements.
7.	Cement Treated Upper Sub-base	The portion of sub base treated with cement so as to provide improved strength.
8.	Contract Specifications	The requirements, which are to be followed in the construction of highways.
9.	Culvert	Any structure, not classified as a bridge, which provides an opening under the roadway.
10.	Day Work	An item in BOQ for which rates for the supply of labour, material and plant & machinery are quoted by the bidder. If PSC considers necessary the varied work is executed on Day Work basis.
11.	Dense Bituminous Macadam (DBM)	A dense bitumen macadam road base or base course manufactured with bitumen.

12.	Design Life	Initially figured to be a 20-year period for pavement.
13.	Earth Excavation	On a construction project that requires new or relocated roadway, the earth, which must be moved from one place to another, is called earth excavation.
14.	Earthen Embankment	Earthen embankment including Sub grade, earthen shoulders and miscellaneous backfill with approved material obtained from roadway excavation, borrow pit or other sources.
15.	Environmental Impact	The effects a project will have upon the environment, especially the human environment.
16.	Excavation	The act of taking out materials, the materials taken out, or the cavity remaining after materials have been removed. NHAI has an agreement with the
17.	Expressway	A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at major intersections.
18.	Fly Ash	The finely divided residue that results from the combustion of ground or powdered coal, transported from the firebox through the boiler by flue gases.
19.	Geo-textile Material	Woven cloth made from nylon type of material that is not bio-degradable
20.	Granular Sub-base	A continuously graded granular material to MOST Specification for Highway Works. Used in the sub-base layer of road construction, which consists of crushed rock, slag or concrete is the superior material and is the only one permitted for major trunk roads and motorways.
21.	Mobilization Advance	The employer typically reimburses the contractor when completed portions of work are performed. Contractors therefore must find financing to help start a new project. The pay item mobilization is provided to help the contractor with these early start-up costs.
22.	Professional Liability Insurance	Professional Liability Insurance is an insurance to cover a loss resulting from malpractice or other liability of a professional person to a third party. The insured's benefits under the policy begin when the insured's liability to a third party has been asserted.
23.	Pavement	The part of a roadway having a constructed surface for the facilitation of vehicular movement.

24.	Permanent Work	The items of work in the BOQ to be executed in accordance with the contract.
25.	Profile Correction Course	A bituminous or non bituminous course provided to rectify the undulations and camber correction of road surface
26	Rigid pavement	Road pavement / surface constructed with cement concrete
27.	River Shingles	Small size stones available in riverbed.
28.	Specification	The standard specifications, supplemental specifications, special provisions, and all written or printed agreements and instructions pertaining to the method and manner of performing the work or to the quantities and qualities of the materials to be furnished under the contract.
29.	SPV	A special company established by a company to meet a specific financial objective.
30.	Terrain	The physical features of a tract of land.
31.	Variation item	This include increase or decrease in quantity, additional or omitted item, change in character or quality, levels, lines, positions and specified sequence
32.	Wearing course	The top surface of a road, which is made of asphalt and laid over the base course. It is made using high quality stone to improve wear and skid resistance.
33.	Weep Holes	Small openings whose purpose is to permit drainage of water that accumulates inside a building component (e.g., a wall etc.)
34.	Wet Mix Macadam (WMM)	Laying and compacting coarse and fine crushed rock or slag blended to meet the grading requirement. Clean crushed graded aggregate and granular material premixed with water to a dense mass on a prepared sub base
35.	Voids	Space occupied by air particles during compaction of any pit.

ANNEXURE - I

HIGHLIGHTS

- Overall performance of NHAI in terms of output in National Highway Development Project Phase-I was 29 per cent. NHAI completed only 1,846 km in terms of completed stretches out of the target of 6,359 km of National Highways by the scheduled date of June 2004. There was no corporate plan to implement such a large project. Deficient planning and inefficient contract management by the design and project consultants contributed to underperformance in achievement of the target. The underperformance was 59 per cent if partially completed stretches were also reckoned.

(Paras 2.1 and 4)

- Phase-I of the project consisted of the National Highways connecting the four metros, forming the Golden Quadrilateral consisting of 5,014 km; port connectivity of 674 km and North-South-East-West corridors of 671 km. NHAI missed the completion goals of all three by 73, 67 and 58 *per cent* respectively. NHDP Phase-I had been re-scheduled for completion by December 2005, overshooting the original schedule by 18 months.

(Paras 1.3 and 2.1)

- The adverse impact of the significant underperformance resulted in unrealised expected benefit of free flow of traffic on these routes. Additionally, NHAI also lost an opportunity to generate toll revenue of at least Rs.560 crore due to the delay in completion of the highways. Besides, the road users also lost potential economy in vehicle operating cost of about Rs.4,300 crore over the period of delay.

(Paras 2.1 and 2.2)

- While the overall status of the output is stated in this report with reference to the entire NHDP Phase-I consisting of 175 stretches, the detailed finding and conclusions are with reference to scrutiny of a sample of 32 stretches, which were selected on the basis of 50 *per cent* or more progress. The audit tests on the sample disclosed that the completed works had suffered delays of upto 28 months from their scheduled dates, with cost overrun of over Rs.690 crore including additional items of work in these stretches alone. In the background of the delay in completion in other stretches, the cost overrun on the entire project is likely to be substantially more, which may compromise the economy of the entire project.

(Para 2.1)

- Imprecise terms of contract with the design consultants, who were responsible for preparation of detailed project reports (DPRs) and project supervision consultants (PSCs), who were responsible for supervision of the works and their underperformance constituted the foremost risk to the project. NHAI did not address the risk associated with the terms of contracts and performance of the two

- categories of consultants with adequate attention, which ultimately became the prime reason for time and cost overrun. NHAI failed to determine comprehensively the terms of reference for preparation of the DPRs by the design consultants and of project supervision by PSCs. The quality of DPRs and the project supervision were left to the discretion of the consultants rather than binding them to comprehensive terms of reference, which severely compromised the value for money spent on hiring them and on

the project. The terms of both the consultants did not provide for performance warranty and penalty for underperformance.

(Paras 3.1 and 3.2)

- DPRs were found deficient in terms of precise determination of quantities and nature of the items of works, land to be acquired, sub-soil investigation, bridge design, correct technical specifications, number of trees to be felled, services/utilities required to be shifted, and designs of various key items of work. The inaccuracy in the quantities of works upset the competitive rates of the bidders, which formed the basis of award of contracts in one case.

(Para 3.2)

- NHAI did not ensure compliance to the quality assurance procedures by the PSCs. They failed to obtain quality assurance plans from the contractors in some cases. Besides, PSCs did not carry out the quality control checks comprehensively to ensure that the quality of the roads was consistent with the specifications. The documentation on quality assurance and quality control by PSCs was incomplete. Independent quality check in seven stretches carried out by the Central Road Research Institute, engaged by Audit, disclosed works which did not uniformly conform to the specifications. It also indicated inefficient contract management by PSCs.

(Paras 2.5 and 7.2.4)

- The performance of PSCs was found wanting in overall supervision of the project, verification of works and bills, variations in the works, determination of rates of payment for varied quantities, approval of the sub-contractors, recommendations on extension of time and compliance to the terms of contract by the civil contractors. Underperformance by PSCs entailed a high risk of overpayments and quality compromise.

(Paras 7.2 and 8)

- NHAI delayed the award of contracts after receipt of bids by upto 17 months beyond the bid validity period entailing extra expenditure due to price escalation. It did not follow comprehensive and uniform criteria / standard for evaluation of bids.

(Para 4.1)

- NHAI did not prepare the contract documents with due care, which resulted in inconsistent and faulty contract clauses. Defective contract clauses with regard to price escalation, re-fixation of rates for variations, recovery of advances etc.

- provided extra financial assistance to the contractors affecting the economy of the project. This entailed a risk of financial loss and contractual/legal complications.

(Paras 3.1, 5.1, 5.2 and 5.3)

- NHAI foreclosed the opportunity to compare the estimates, quoted rates and actual expenditure per unit length by not standardising the highway stretches or putting in place any more robust and effective cost control mechanism as an alternative, which deprived it of a framework for evaluation of the rates and cost. The cost per km in the contracts varied from Rs.1.86 crore to Rs.4.20 crore in contiguous stretches awarded during the same time.

(Para 4.2)

- Similarly NHAI did not standardise or install any alternative cost control mechanism and determine the bills of quantities (BOQ) of various items used in the road construction. The extra cost worked out to Rs.260.98 crore with reference to the lowest quantities of bituminous work in the 23 stretches, for which analysis was made. The quantities of bituminous work per unit length shown as having been used varied upto 12.80 times.

(Para 5.4)

- Deficient internal control and accountability system within NHAI was responsible for loss of Rs.24.44 crore in the sample stretches only on account of non-recovery of amounts from the contractors. NHAI failed to verify the authenticity and validity of the bank guarantees provided by the contractors.

(Para 7.1.1)

- Validity of cash forecast by NHAI had also been rendered questionable. The projected cash surplus of Rs.13,239 crore in Phase-I by the end of 2011-12 is not likely to be achieved and there is a probability of NHAI suffering cash deficit at the end of 2011-12. On the other hand, due to slow progress of the works, NHAI was left with surplus funds mobilised through bonds and consequential avoidable charge of Rs.77.25 crore towards interest during 2000-01 and 2001-02.

(Paras 2.3 and 9.2)

- NHAI was slow to introduce tolling on the completed portions of the road and lost about Rs.42 crore due to delayed decisions/notifications.

(Para 2.4)

- Accounting practices adopted by NHAI were not in consonance with the Generally Accepted Accounting Practices. NHAI exhibited 39 completed stretches valuing Rs.3,079.65 crore as Capital-Work-in-Progress (CWIP). Assets created out of Government Grants and Loans were also exhibited as CWIP against NHAI's own accounting policy. The ownership of the assets obtained during the course of execution of works has not been decided. Interest earned on unutilised funds amounting to Rs.1,715.43 crore was also credited to the capital.

(Para 11)

ANNEXURE - II

LIST OF NON-PERFORMING CONTRACTORS

Sl.No.	Foreign Firms	Sl. No.	Indian Firms
1.	Bhumihighway Venture Berhad (400463-M) No. 35 Jalan SG 3/1 TMN SERI Gombak 68100 Batu Caves Selangor-Darul Ehsan Malaysia Ph 6(03) 61842824	1.	Ashwani Contruction Company B-3/58, 3rd Floor, Safdarjung Enclave New Delhi
2.	Centrodostroy, Russia 19, Kuznetsky Most Moscow-107031 (Russai)	2	Afecons Infrastructure Ltd. Veera Desai Road P.B.No. 11979, Andheri (W) Mumbai-400053
3.	China Coal Construction Group Corpn. 21, Hepingli North Street Dongcheng Distt. Beijing, China	3	A.L.Sudershan Cons.Co.Ltd. 6-3-249/3/2/1,1st Floor, Naveen Nagar Colony, Road No. 1, Banjara Hills, Hyderabad-500034 Fax No. 23302493
4	Dolomite Industries Co. Sdb.Bhd **11 3/4** Mile, Sg. Serai, 43100 Ulu Langat, P.O.Box 6, 43207 Batu 9 Cheras Selangor Darul Ehsanm, Malaysia Fax No. 00603-90212610	4	APIL (Subsidiary of Afcons Infrastructure Ltd.) AFCONS-APIL (JV) Veera Desai Road P.B.NO. 11979, Andheri(W) Mumbai-400053
5	PATI-SDN-BHD 3rd Floor, No. 38 Jalan Dang Wangi, 5100 Kuala Lumpur Malaysia	5	Bhageeratha engineering Ltd. B-3/58, 3rd Floor, Safdarjung enclave New Delhi-110029
6	Sticco P.O. Box – 10484 Riyadh-11433 Kingdom of Saudi Arabia	6	DD Buildiers Ltd. 9, Satyanagar Bhubaneshwar (Orissa)
7	UEM Builders (6551-K) 17th Floor, Menara 2, Faber Towers Jalan Desa Bahagia, Taman Desa Off Jalan Klang Lama 58100 Kuala- Lumpur, Malaysia	7	M/s Essar Group Essar House, Mahalaxmi Mumbai-34 Fax.No. 022-24954924
8	You-one Engineering Construction Co. Ltd. 75-95 Sposomun-Dong Chung-gu Seoul (Korea)-100110	8	Lanco Construction C-10, Ashoka Tower, Community Centre, Janakpuri, New Delhi-58
		9	Rani Construction C-10, Ashoka Tower, Community Centre Janakpuri, New Delhi-58.

ANNEXURE–III

Sub-standard work or work not conforming to the specifications

Sl. No.	Name of the Stretch	Description of sub-standard work	Qty Executed	Value (Rs. in crore)	Audit observations	Reply of Ministry/NHAI	Remarks of Audit
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Gorhar–Barwa Adda	Inferior Geo-textile used / no Geo-textile used	11,91,656 sqm	5.79	The Geo-textile material used between Sub grade and Granular Sub-base in this project was not an approved material.	The work was to be approved after testing/ certification by IIT Delhi. IIT Delhi did not have the facility to do all testing. It was then left to the Engineer to decide.	Due to non-availability of testing facilities, NHAI failed to ascertain the suitability of the material used.
2.	Gurgaon-Kotputli	Additional layer of Distressed Bituminous Pavement		2.11	CRRI observed premature distress like deformation and cracking due to unstable mix, less voids in the mix and loose material in the sub-base. On being pointed out the same was rectified within the defect liability period at a cost of Rs.2.11 crore without any recovery from the contractor.	NHAI has disagreed with this payment and accordingly matter has since been referred to arbitrator. The award of the arbitrator was awaited.	Final recovery of the overpayment would be watched in audit.
3.	Hosur-Krishnagiri	Granular Sub Base with unconfirmed compressive strength	1,07,754 sqm	8.40	The cement treated sub-base should have compressive strength of 9 MPA/6MPA at 98 per cent maximum dry density as per technical specifications. But the PSC changed the specification to lower strength resulting in the work becoming sub-standard.	There was something inherently wrong with the specification provided in the contract. The strength specified was not achievable.	The reply that the applicable specifications are wrong is not acceptable. MOST specifications are based on empirical testing and the required strength was achievable. NHAI did not fix responsibility for the execution of this sub-standard work.

4.	Surat Manor-Pkg-1	Dense Bituminous Macadam (DBM)	89024 cum	19.03	According to MOST specifications, DBM should be provided with wearing course. But even after execution, the wearing course was not provided resulting in sub-standard execution of work.	The specifications are only suggestive. The contractor / Engineer are responsible for quality of work done.	The specifications form a part of the agreement and no deviation is permissible. Clause 507.5 requires wearing course as early as possible even if road has been opened to traffic. The liability of PSC/ Contractor to rectify did not permit relaxation of specifications. Further, the defect may not manifest during the Defect Liability Period, but the life of the road would be reduced.
5.	Surat-ManorPkg-III	Pavement Quality Concrete on Toll Plaza		2.72	Agreement was to provide PQC with sensor paver. But the contractor did not use sensor paver.		
6.	Surat-ManorPkg-1	Well having shifts and tilts		1.95	The well should be constructed with a tolerable shift/tilt ranging from 50 to 300 mm only as against the executed shift/tilt ranging from 441 to 535 mm in three wells resulting in poor quality of work.		
		Total		**40.00**			

ANNEXURE - IV

AMENDMENTS SUGGESTED BY NHAI

Amendment required for Institutional strengthening

Keeping in view the enhanced mandate and change in focus from the EPC contracts to PPP projects, NHAI is in the process of strengthening the institution. A proposal of restructuring of NHAI has been prepared by Inter-Ministerial Committee, which has subsequently been discussed in the meeting of Committee of Secretaries. Some of the recommendations in the report would require amendment in the NHAI Act, 1988 (68 of 1988) and amendment to the NHAI (the Term of Office and Other Conditions of Service of Member) Rules, 2003.

2 The following amendment is required to be made in order to strengthen the NHAI:

(i) section 3 of Section 3 of the NHAI Act, 1988 (68 of 1988) for increase in the number of full-time Members from five to six and increase in number of part-time Members from four to six.

(ii) Amendment to the Section 6 of the NHAI (the Term of Office and Other Conditions of Service of Member) Rules, 2003 for increase in the part time Members from four to six. The two Members to be included in the Authority will be from the non-Government Sector, one from IITs/ IIMs and other from financial institutions. This is mainly to widen the perspective for private sector point of view.

(iii) to be made in the NHAI (the Term of Office and Other Conditions of Service of Member) Rules, 2003 for inducting Member (PPP) whose qualifications and experience have been laid down in the report of restructuring of NHAI. The Member (PPP) would be responsible for formulating the policy for PPP projects, financial modelling and appraisal and should have adequate experience in the field of planning, structuring and management of PPP projects of infrastructure sector, preferably in the highways.

(iv) to be made in the NHAI (Recruitment, Seniority and Promotion) Regulation, 1996 for relaxation in the age of consultant to be appointed on contract basis specifically for the posts of Contract Management Specialist, Transport Economist, Transport Planner and Financial Analyst.

Amendment required for Land Acquisition:

Amendment in the NH Act, 1956 would also be required to facilitate the acquisition of land expeditiously for the NHAI projects. The following needs to be added under Sub-section 7 of Section 3-G NH Act, 1956:

(1) In addition to the market-value of the land, the Competent Authority or the Arbitrator shall in every case award a sum of 30 per centum on such market value, in consideration of the compulsory nature of the acquisition.

(2) The 1956 Act does not specifically provide for a time limit for initiating the arbitration proceeding challenging the compensation determined by the Competent Authority. There have been instances where interested persons have challenged the awards determined by the competent authority after two years which not only delays the completion of the LA process but also creates administrative problems. It may be better to prescribe a time limit for the interested persons for challenging the compensation award before the Arbitrator. Following need to be added in the NH Act

"Provided that every such application shall be made -

within six months from the date of the Competent Authority's determination."

(3) to include acquisition through mutual consent to a limited extent only in the following cases:

(a) Missing plots, which are left out from the bulk acquisition.

(b) Additional land required due to alteration of alignment at implementation stage.

To adopt this process, adequate protective mechanism would be put in place for ensuring transparency in the rates and for establishing rightful ownership.

(4) Explore the possibility of invoking urgency clause, as in case of LA Act, for faster LA process in some special cases.

Amendment required for Environment Clearance:

All widening projects where diversion of land of the reserved forest / national park/ sanctuary land is not involved should be exempted from the purview of the Environment clearance. This would require amendment in the Environment Impact Assessment (EIA) notification.

Grant of Tax Exemption Status to NHAI u/s. 10 of Income Tax Act.

National Highways Authority of India (NHAI) was constituted by an Act of Parliament namely National Highways Authority of India Act, 1988 (68 of 1988), as an autonomous body of the Ministry of Shipping, Road Transport and Highways.

The objectives and functions of the Authority has been specified in section 16 of the National Highways Authority of India Act, 1988. As per the enactment the Authority has executive responsibility for development, maintenance and operation of the National Highways and associated facilities as entrusted to the Authority by the Ministry of Shipping, Road Transport and Highways. The functions of the Authority as per sections 16 of the NHAI Act are as under: -

(a) survey, develop, maintain and manage highways vested in or entrusted to it;

(b) construct offices or workshops and establish and maintain hotels, motels, restaurants and rest-rooms at or near the highways vested in or entrusted to it;

(c) construct residential buildings and township for its employees;

(d) regulate and control the plying of vehicles on the highways vested in, or entrusted to it, for the proper management thereof;

(e) develop and provide consultancy and construction services in India and abroad and carry on research activities in relation to the development, maintenance and management of highways or any facilities there at;

(f) provide such facilities and amenities for the users of the highways vested in, or entrusted to it as are, in the opinion of the Authority, necessary for the smooth flow of traffic on such highways;

(g) form one or more companies under the Companies Act, 1956 to further the efficient discharge of the functions imposed on it by this Act;

(h) engage, or entrust any of its functions to, any corporation or body corporate owned or controlled by the Government;

(i) advice the Central Government on matters relating to highways;

(j) assist, on such terms and conditions as may be mutually agreed upon, any State Government in the formulation and implementation of schemes for highway development;

(k) collect fees on behalf of the Central Government for services or benefits rendered under section 7 of the National Highways Act, 1956, as amended from time to time and such other fees on behalf of the State Governments on such terms and conditions as may be specified by such State Governments; and

(l) take all such steps as may be necessary or convenient for, or may be incidental to, the exercise of any power or the discharge of any function conferred or imposed on it by this Act.

As per section 3 of Chapter-2 of NHAI Act, 1988

2 The Authority shall be a body corporate by the name aforesaid having perpetual succession and a common seal, with power, subject to the provisions of this Act, to acquire, hold and dispose of property, both movable and immovable, and to contract and shall by the said name sue and be sued.

3 The Authority shall consist of:-

(i) a Chairman

(ii) not more than five full-time members; and

(iii) not more than four part-time members

to be appointed by the Central Government by notification in the Official Gazette.

Projects taken up by the Authority are as under:-

(i) Govt. approved the programmes of NHDP Phase-I (mainly Golden Quadrilateral) in April 2000 at an estimated cost of Rs.30300 crores.

(ii) Govt. approved NHDP Phase-II (mainly North-South and East-West Corridor) in December 2003 at an estimated cost of Rs.31831crores.

(iii) Govt. approved NHDP Phase-III-A and III-B (connectivity to State Capitals, places of tourist and economic importance) in March 2005.

In addition, following are the future programmes of NHAI:-

(i) NHDP Phase IV : 2 laning of 20,000 km of National Highways on BOT/Annuity at an estimated cost of Rs.27800 crore.

(ii) Accelerated Road Development in North East-603 km. at an estimated cost of Rs.12, 123 crore.

(iii) NHDP Phase V: 6 laning of selected stretches (6500 km.) on BOT/Toll at an estimated cost of Rs.41, 210 crore.

(iv) NHDP Phase VI: Development of 1,000 km Expressways on BOT/Toll at an estimated cost of Rs.16, 680 crore.

(v) NHDP Phase VII: Ring Roads, Bypasses, Grade Separators, Service Roads etc. on BOT/Annuity at an estimated cost of Rs.16, 680 crore.

The projects taken up by the Authority have been considered to be priority projects of the Govt. of India and following benefits will be available to the economy and the broad section of the society.

(i) Vehicle operating cost saving.

(ii) Travel time saving, fuel saving & saving in foreign exchange.

(iii) Benefits to the trade.

(iv) Saving in maintenance cost of vehicles.

(v) Reduced accidents.

(vi) Area development.

(vii) Increased employment potential

(viii) Contributing to GDP etc.

For financing the projects, various sources of financing has been identified as detailed below:

(i) A dedicated non-lapsable 'Central Road Fund' has been created for pulling the resources generated from the cess on petrol and diesel.

(ii) Loan/grant from, various multilateral funding agencies e.g. World Bank, Asian Development Bank, Japan Bank for International Cooperation.

(iii) NHAI has been authorized to raise fund through bond issue and NHAI bond has been made eligible for capital gains tax exemption.

(iv) Direct funding from the budgetary resources of Government of India.

(v) Private Sector participation for funding of BOT and Annuity Projects of NHAI.

(vi) Subsidiaries of NHAI have been approved for taking up projects such as Port connectivity and Bypass etc.

The Authority is working under the Administrative control of Ministry of Shipping, Road Transport and Highways. Projects are approved by the Govt. of India and funded

mainly through Central Road Fund, financing from multilateral funding agencies and borrowings. The objective of the Authority purely related to advancement of public utility in public interest.

In view of above, it is submitted that Authority and its subsidiaries (as provided in NHAI Act 1988) may be granted exemption under section 10 of Income Tax Act on the similar lines as has already been granted to the following: -

(i) Coffee Board, Rubber Board, Tea Board constituted under respective Act.

(ii) Marine Products Export Development Authority, Insurance Regulatory and Development Authority constituted under respective Act

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ANNEXURE –V

RESTRUCTURING OF NHAI AS SUGGESTED BY MINISTRY

1. The vision statement of NHAI to be:

> *"To meet the nation's need for the provision and maintenance of National Highways network to global standards and to meet user's expectations in the most time bound and cost effective manner, within the strategic policy framework set by the Government of India and thus promote economic well being and quality of life of the people."*

2. NHAI's Business model of outsourcing major activities to be essentially retained. NHAI Board to evolve an appropriate procedure/system of sample test checks by Project Directors for ensuring the veracity of the bills prepared by the Supervision Consultant for payments to the contractor and appropriateness of the authorisation given by the Supervision Consultant for variations.

3. Selection of the Chairman by a Search Committee headed by the Cabinet Secretary and comprising Secretary, DORT&H, Secretary, Planning commission, a CMD or MD of a financial institution and one of the directors of IIMs to be nominated by the Cabinet Secretary.

4. The tenure of the Chairman to be fixed for at least three years which can be extended upto five years.

5. Age in case of the Chairman to be relaxed upto 62 years if required for three-year tenure.

6. Increase in the number of part time Members by two (from 4 to 6), who would be from the non-Government sector, one from IITs/IIMs and the other from financial institutions.

7. NHAI to have six full time members (against five at present) – one each for finance, administration, public private partnership (PPP), two Members (Project) and one Member (Technical).

8. Member (Finance) to have adequate experience in finance and financial management, preferably knowledge of financial market and funding of infrastructure projects.

9. Member (PPP) to be responsible for formulating policy for PPP projects, financial modelling and appraisal of PPP projects and to have adequate experience in the field of planning, structuring and management of PPP projects of infrastructure sector, preferably in the highways.

10. Member (Technical) to act as the repository of technical knowledge to be responsible for R&D, technical manuals, standards, and specifications that guide design and safety. The Member (Technical) and the proposed standardization and R&D Cell would supervise the technical sanctions and standards for all the stages of the preparation of DPRs and administration of contracts.

11. Creation of a Project Appraisal Cell to undertake comprehensive project appraisal and critically examine realistic capacity planning, optimal specification, estimates of toll revenue, cash flows, funding tie-up, and financial viability within the maximum grant permissible. The cell to be

headed by financial analyst (rank of CGM) and to comprise experts in the areas of finance, transport economics, transport planning, and legal aspects.

12. Creation of a Planning Cell with key responsibilities of planning for new projects and supporting the strategic functions of top management. The Cell to be headed by a GM level officer reporting to CGM (PQ). The CGM (PQ) will report directly to the Chairman.

13. Creation of a Quality Assurance Cell with key responsibilities for promotion of quality assurance initiatives, quality checks through inspection of the ongoing works including quality audit through external professional agencies. The Cell would be headed by a GM level officer and report to CGM (PQ).

14. Creation of a Standardization and R&D Cell for tracking new technical developments and international best practices in road and bridge construction, formulating standards and manuals, and for undertaking R&D activities. The cell to be headed by a CGM level officer, to report to Member (Technical).

15. Creation of a Contract Management Cell for advising on all key contract agreement issues. In addition, the unit will advise NHAI in case any amendments to the contracts are to be made during the implementation of the projects. The cell will be headed by a contract management specialist (rank of CGM) reporting to one of the Members (Project).

16. Creation of a Legal and Arbitration Cell headed by a Chief General Manager with experience in Concessions and Contract Law. Apart from building sufficient in-house capabilities, the cell should be enabled to retain specialist legal counsel. The specific responsibilities should include legal vetting of the terms of reference of consultants, bid documents etc., legal advice on contract management and other issues, monitoring of dispute resolution process and outcomes and all legal and arbitration cases. The cell would be located under Member (Administration).

17. Creation of a Road Safety Cell to appraise safety, set operational policy and safety standards and monitor asset performance to be located under Member (Technical).

18. A Committee under CGM to examine and accept the Detailed Project Report. A monthly report on the acceptance of various DPRs would be placed before the NHAI Board.

19. NHAI to prepare manuals and guidelines for various processes and proper administration of contracts.

20. To empower the Authority to create posts in NHAI upto the level of Chief General Manager.

21. Creation of posts of CGM (Finance) (2 posts), CGM (PQ), CGM (SR&D), CGM (Administration and HR), CGM (IT), CGM (LA), CGM (Legal), CGM (Safety), Financial Analyst (CGM level), Contract Management Specialist (CGM level). CGMs for project implementation and corridor management as per the norms fixed by the NHAI Board.

22. To consider State level institutions including some State Governments as “partner institutions” at the regional level for implementing some of the mandated works under NHAI’s umbrella.

23. To identify and retain key persons and also recruit some personnel directly to build, over time, a *core of permanent employees* of NHAI.

24. To revisit the comprehensive training plan prepared by NHAI for its employees in the light of shift of focus from EPC to PPP and also to expand the plan to include consultants and contractors.

25. To empower the Authority to engage, where required, outside experts (with relaxation of age if needed) specifically the posts of for financial analyst, transport economist, contract management specialist and legal expert; on compensation to be determined by the Authority in line with the experience and availability of the appropriate personnel.

26. To revamp and strengthen organizations like the National Institute for Training of Highways Engineers (NITHE), Central Roads Research Institute (CRRI), Indian Roads Congress (IRC) to enhance overall capacity and capability in the highways sector.

27. To set-up a Knowledge Management System for capturing and using experiences in bid process; contract management; time, cost and quality performance of contractor; and performance of design consultants in terms of abnormal variations.

ANNEXURE -VI

MINUTES OF THE 2nd SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS HELD ON 25 JULY 2006

The Committee sat from 1630 hours to 1730 hours.

CHAIRMAN

1. Shri Rupchand Pal

MEMBERS

LOK SABHA

2. Shri Ramesh Bais
3. Shri Manoranjan Bhakta
4. Dr. M. Jagannath
5. Dr. Vallabhabhai Kathiria
6. Shri Shriniwas Patil
7. Shri Kashiram Rana
8. Shri Mohan Rawale
9. Shri Ramjilal Suman
10. Shri Ram Kripal Yadav

MEMBERS

RAJYA SABHA

11. Shri Ajay Maroo
12. Shri. K. Chandran Pillai

SECRETARIAT

1.	Shri S. Bal Shekar	Joint Secretary
2.	Shri. N.C. Gupta	Under Secretary
3.	Shri Ajay Kumar	Under Secretary

OFFICE OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA

1. Shri U. Bhattacharya Deputy Comptroller & Auditor General cum Chairman, Audit Board.

2. Shri Sunil Chander Principal Director (Commercial).

3. Shri A.K. Singh Principal Director of Commercial Audit & Ex-Officio, Member Audit Board-I

2. At the outset, the Chairman welcomed the members of the Committee and the representatives of the C&AG. Thereafter, the Committee were briefed by the Officials of Comptroller & Auditor General of India on various aspects related to National Highways Development Project of National Highways Authority of India as contained in the C&AG's Report No. 7 of 2005 (Commercial). The clarifications sought by the Members were also resolved by the Officials of C&AG.

The Committee then adjourned.

MINUTES OF THE 3rd SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS HELD ON 22 August, 2006

The Committee sat from 1500 hrs to 1645 hrs.

CHAIRMAN

Shri Rupchand Pal

MEMBERS - LOK SABHA

2. Shri Manoranjan Bhakta
3. Smt. Preneet Kaur
4. Shri Shriniwas Patil
5. Shri Kashiram Rana
6. Shri Ram Kripal Yadav

MEMBERS - RAJYA SABHA

7. Shri Rishang Keishing
8. Prof. Ram Deo Bhandary
9. Shri Dinesh Trivedi

SECRETARIAT

1.	Shri S. Bal Shekar,	Joint Secretary
2.	Shri N. C. Gupta,	Under Secretary
3.	Shri Ajay Kumar,	Under Secretary

OFFICE OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA

1.	Shri U. Bhattacharya	Deputy Comptroller and Auditor General
2.	Shri A.K. Awasthi	Director General (Commercial)
3.	Shri Sunil Chander	Principal Director (Commercial)
4.	Ms. Meena Swaroop	Principal Director (Commercial)

REPRESENTATIVES OF NATIONAL HIGHWAYS AUTHORITY OF INDIA

1.	Dr. Satyanarayana Dash	Chairman
2.	Shri P.C. Chaturvedi	Member (Administration)
3.	Shri Nirmal Jit Singh	Member (Technical)
4.	Shri Indu Prakash	Member (Technical)
5.	Shri G. Sharan	Member (Technical)

2. The Committee took oral evidence of the representatives of National Highways Authority of India (NHAI) in connection with examination of C&AG's Report No. 7 (Commercial) of 2005 on National Highways Development Project (NHDP) Phase-I which has been selected as a subject for examination during 2006-2007.

3. At the outset, the Chairman welcomed the representatives of NHAI and also drew their attention to direction 58 of the Directions by the Speaker relating to evidence before the Parliamentary Committee. Thereafter, the representatives of NHAI made an audio-visual presentation on the National Highways Development Project being implemented by the NHAI. After audio-visual presentation, Members raised queries on various aspects pertaining to the subject and the explanations/clarifications on the same were made by the representatives of NHAI. Information on some of the points raised by the Committee was not readily available with the representatives of NHAI. It was, however, promised by them that the same would be furnished to the Committee Secretariat in due course.

4. The Chairman then thanked the representatives of NHAI for providing all the material/information on the subject matter as desired by the Committee.

5. A copy of the verbatim proceedings has been kept on record separately.

6. The witnesses then withdrew.

7. The Committee then adjourned.

MINUTES OF THE 5th SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS HELD ON 7th SEPTEMBER, 2006

The Committee sat from 1030 hrs to 1145 hrs.

CHAIRMAN

Shri Rupchand Pal

MEMBERS - LOK SABHA

2. Shri Suresh Kalmadi
3. Dr. Vallabhbhai Kathiria
4. Smt. Preneet Kaur
5. Shri Ramjilal Suman
6. Shri Bagun Sumbrui
7. Shri Ram Kripal Yadav

MEMBERS - RAJYA SABHA

8. Shri Ajay Maroo
9. Shri K. Chandran Pillai
10. Shri Pyarimohan Mohapatra

SECRETARIAT

1.	Shri J.P. Sharma	Joint Secretary
2.	Shri N. C. Gupta,	Under Secretary
3.	Shri Ajay Kumar,	Under Secretary

OFFICE OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA

5.	Shri U. Bhattacharya	Deputy Comptroller and Auditor General
6.	Shri A.K. Awasthi	Director General (Commercial)
7.	Shri Sunil Chander	Principal Director (Commercial)
8.	Shri J. Wilson	Principal Director (Commercial)

REPRESENTATIVES OF MINISTRY OF SHIPPING, ROAD TRANSPORT AND HIGHWAYS

1.	Shri Vijay Singh	Secretary (RT&H)
2.	Shri C. Balakrishnan,	Additional Secretary & Financial Advisor
3.	Shri A.P. Bahadur	Chief Engineer (PIC)

4. Dr. Satyanarayana Dash, Chairman, NHAI
5. Shri Nirmal Jit Singh, Member (Technical), NHAI

2. The Committee took oral evidence of the representatives of Ministry of Shipping, Road Transport and Highways in connection with examination of C&AG's Report No. 7 (Commercial) of 2005 on National Highways Development Project (NHDP) Phase-I of National Highways Authority of India which has been selected as a subject for examination during 2006-2007.

3. At the outset, the Chairman welcomed the representatives of the Ministry and also drew their attention to direction 58 of the Directions by the Speaker relating to evidence before the Parliamentary Committee. Thereafter, Members raised queries on various aspects pertaining to the subject and the explanations/clarifications on the same were made by the representatives of the Ministry. Information on some of the points raised by the Committee was not readily available with the representatives of the Ministry. It was, however, promised by them that the same would be furnished to the Committee Secretariat in due course.

4. The Chairman then thanked the representatives of the Ministry for providing all the material/information on the subject matter as desired by the Committee.

5. A copy of the verbatim proceedings has been kept on record separately.

6. The witnesses then withdrew.

7. The Committee then adjourned.

MINUTES OF THE 12th SITTING OF THE COMMITTEE ON PUBLIC UNDERTAKINGS HELD ON 6th December 2006

The Committee sat from 1630 hrs to 1715 hrs.

CHAIRMAN

Shri Rupchand Pal

MEMBERS - LOK SABHA

2 Dr. M. Jagannath
3 Shri Suresh Kalmadi
4 Dr. Vallabhbhai Kathiria
5 Smt. Praneet Kaur
6 Shri Shriniwas Patil
7 Shri Kashiram Rana

MEMBERS - RAJYA SABHA

8 Shri Rishang Keishing
9 Shri. K. Chandran Pillai
10 Prof. Ram Deo Bhandary
11 Shri Dinesh Trivedi

SECRETARIAT

1.	Shri J.P. Sharma	Joint Secretary
2.	Shri N. C. Gupta	Under Secretary
3.	Shri Ajay Kumar	Under Secretary

OFFICE OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA

1.	Shri A.K. Awasthi	Director General (Commercial)
2.	Shri J.Wilson,	Principal Director of Commercial Audit

2. The Committee considered the two Draft Reports on the following subjects and adopted the same with some modifications: -

(i) National Highways Authority of India – National Highways Development Project, Phase-I; and

(ii) XXXXXX XXXXXXX XXXXXXX XXXXXX.

3. The Committee authorized the Chairman to finalise the Reports for presentation.

4. XXXXXX XXXXX XXXXXXX XXXXXXXX XXXXXXX

The Committee then adjourned.